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The OIL WEEKLY

June 17. 1927 Volume 45. No. 13

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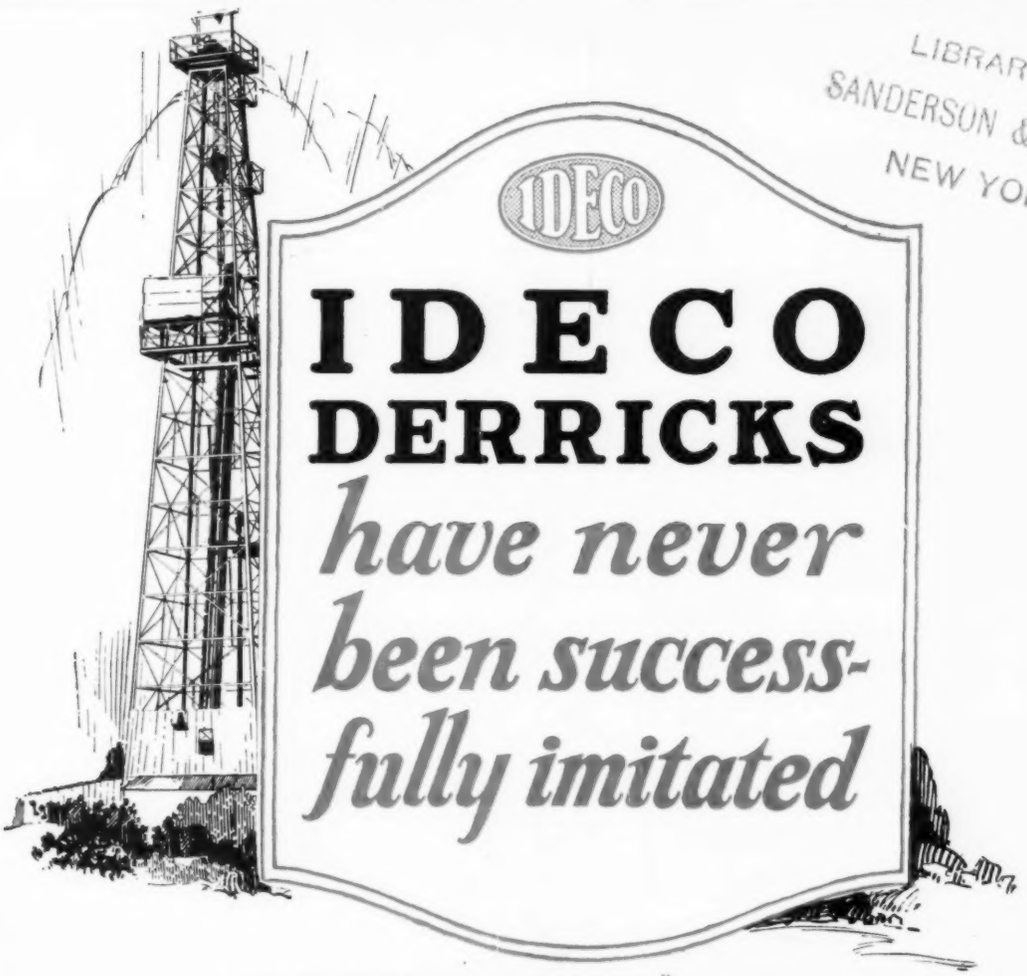
NEW YORK



INTERNATIONAL STEEL IDECO DERRICKS
(GALVANIZED)

The International Derrick & Equipment Company

The largest company devoted exclusively to the manufacture of steel (galvanized) equipment for the oil, gas and artesian industries

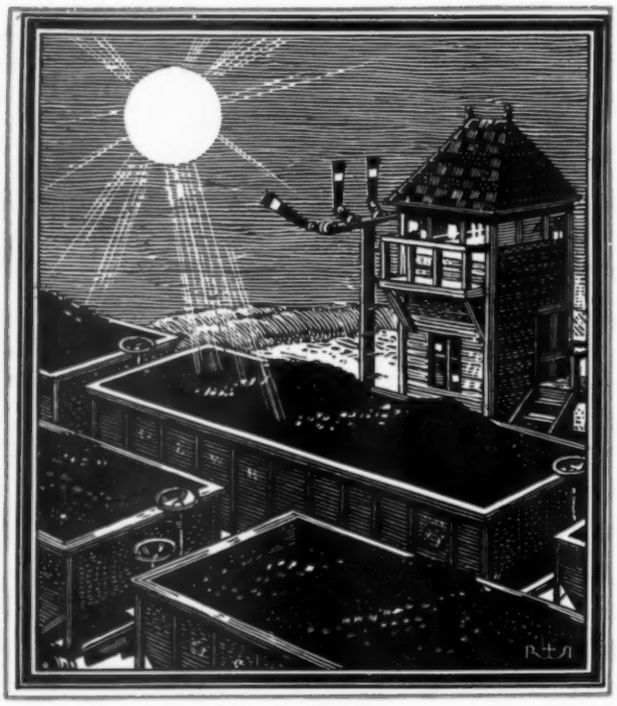
COLUMBUS, OHIO TORRANCE, CAL.

Dallas	Corsicana	Eldorado	Wewoka
Houston	Pampa	Tulsa	Denver
Mexia	Panhandle	Tonkawa	Casper
Wichita Falls	Shreveport	Drumright	Torrance
Amarillo	Oil City	Okemah	Los Angeles
Borger	Smackover	Seminole	Taft

California Representative
National Supply Co. of California

Export Representation: 74 Trinity Place, New York City; Columbus, Ohio; Los Angeles and San Francisco, Cal.

Sold 140 Carloads of coal— *in hot weather*



IT WAS SWELTERING May weather in Omaha—a bad time, you might think, to sell coal. Yet a coal company manager and his assistant compiled a list of 200 dealers in Nebraska, Iowa and Missouri who were good winter customers. Two men in three days made the calls, the charges approximating $200. They sold 140 carloads, $21,000 worth. Ordinarily it took three salesmen two months to cover this same territory. Never before in hot weather had sales run so high.

FROM ALL KINDS OF BUSINESSES come reports of the use of long distance calls to get more accomplished, at less cost. Sometimes a task can be done in days by telephone that otherwise would take months. Business can be secured that otherwise would be lost. Salesmen and executives can conserve their productive time and so increase the good results of their work.

Long Distance is as important to inter-community and inter-sectional business as the local telephone is to local affairs. How can any business concern reach its greatest development without a regular use of long distance calls?

Anywhere is as close as your telephone. Is there some distant call that should be made now? You'll be surprised how little it will cost. . . . . *Number, please?*

BELL LONG DISTANCE SERVICE

The OIL WEEKLY. Issued weekly by the Gulf Publishing Co., 1116 Dallas Ave., Houston, Texas. Subscription price $1.00 per year; 10 cents per copy. Entered as second-class mail matter December 23, 1916, at the post office at Houston, Texas, under act of March 3, 1879

SANDERSON & PORTER
JUN 20 1927
REF'D TO

ENDURANCE

The newspapers said that Lindbergh undertook his glorious adventure *alone*—but, of course, the newspapers are mistaken.

How can a man be *alone* when the hopes, prayers and well wishes of a hundred million admirers accompany him? How can a man be *alone* when the entire civilized world is with him in spirit—thrilling to his thrills, sharing in his fears, glorying in his triumph?

Driving irresistibly on thru the silent, hungry darkness of an Atlantic night, Lindbergh may have been lonely, but certainly he was not *alone*.

Grit, stamina and endurance are marvelous attributes—in oil industry pumps as well as in aviators!

GASO PUMP & BURNER MFG. CO. *Tulsa, Oklahoma*

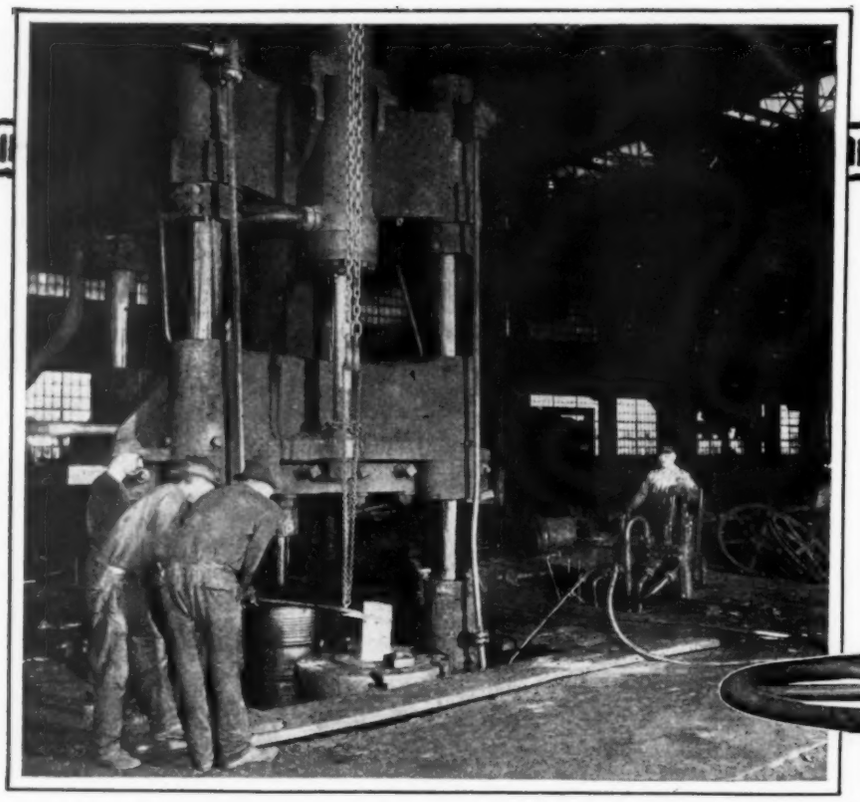
. . . . . .

Pumps that Last and Last and Last

Gaso Walking Beam Pump No. 601—450 to 600-lb. pressure. Especially adapted to leases where no pumping power is available. Straight-line pull prolongs life, reduces wear.

Gaso Walking Beam Pump No 604—Designed for gas or vacuum. Connects to the walking beam with either wood or pipe pittman. Will withstand world of abuse.

GASO PUMPS
for every oil industry need



No Defects Can Survive the Forging Hammer

And no high pressures will ever find a weak spot in the new Darling *Forged Steel* Drilling Gate Valve, for it's made from the same metal and by the same process as the finest tools and high-speed machine parts.

Being hammered to shape and machined to perfection, this new drilling valve has an extremely high factor of safety without additional weight. You're assured of complete freedom from piping, sand holes or porous spots which might give way under pressure to start a havoc of wasted oil and gas.

Whether you expect your well to come in like a lion or like a lamb, the Forged Steel Drilling Valve is the *logical* valve to lower your tools through. With it in place, you're all set for any emergency that may arise—assured of perfect control at all pressures.

Detailed Information on Request.

DARLING VALVE & MFG. COMPANY

Williamsport, Pa.

New York Chicago Oklahoma City Houston

Mid-Continent Distributors:

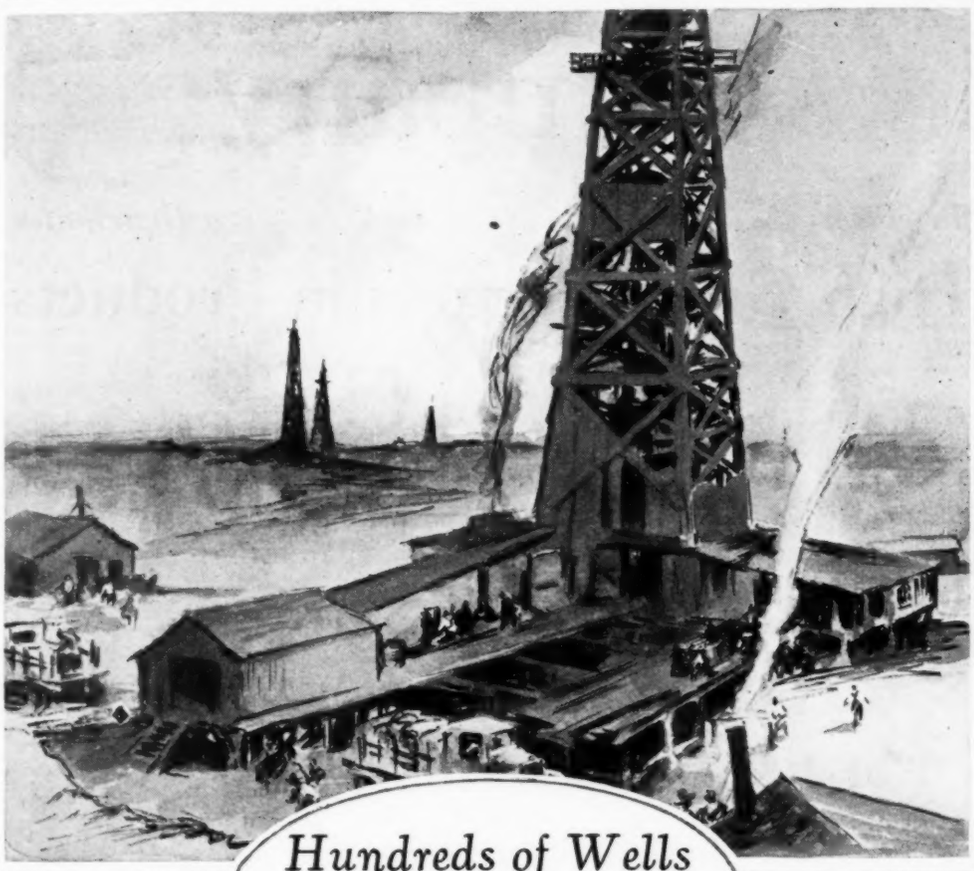
Frick-Reid Supply Co. **Atlas Supply Co.**
International Supply Co. **Petroleum Supply Co.**

California Distributor:
Petroleum Equipment Company, Los Angeles

DARLING

FORGED STEEL GATE VALVES

Say you saw it in The OIL WEEKLY



Hundreds of Wells Owe Their Life to This Protection

. . . . How many wells now in profitable production owe their existence to the protective influence of HALLIBURTON Oil Well Cementing, is impossible to say. Certainly the number reaches into many hundreds—probably into thousands. No well is safe unless properly safeguarded.

HALLIBURTON
OIL WELL CEMENTING CO.
Duncan, Oklahoma

HALLIBURTON
OIL WELL CEMENTING CO.
Duncan, Oklahoma

Say you saw it in The OIL WEEKLY

Magnolia Petroleum Company

Producer *Refiner* . *Jobber* *Distributer*

High Grade Petroleum Products

FUEL OIL

LOADING STATIONS AT

BEAUMONT CORSICANA SABINE GALVESTON FT. WORTH
HARBOR ISLAND LULING CORPUS CHRISTI DALLAS
HERMA, ARK. MIRANDO

MANUFACTURER OF

Magnolene
REG. U.S. PAT. OFFICE

THE
DEPENDABLE
LUBRICANT

"a grade for each condition"

For satisfactory operation of Ford Cars use Magnolene Motor Oil for Fords

REFINERIES LOCATED AT

Beaumont, Corsicana and Ft. Worth

General Offices: DALLAS, TEXAS

DIVISION SALES OFFICES:

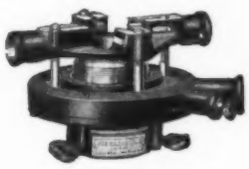
DALLAS HOUSTON FT. WORTH SAN ANTONIO OKLAHOMA CITY LITTLE ROCK
AMARILLO EL PASO

Inquiries Respectfully Solicited

A Letter from Harry G. Nye

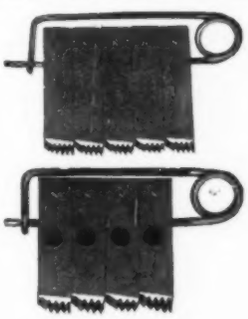
The rugged construction and few working parts account for the simplicity and durability of these Nye Receding models. They do the work easily and efficiently.

No. 1 Nye Receding Pipe Threader, complete ....$9.60 net
West of Rocky Mountains.$10.80



The No. 1A is the same as the No. 1 except that it is equipped with a ratchet for work where space is restricted.

No. 1A Nye Receding Pipe Threader, complete ..$12.00 net
West of Rocky Mountains.$13.50



Nye Chasers
Fit Nos. 1, 1A and 2 Receding Die Stocks

Each set is guaranteed in every particular. Will cut much easier than other similar dies.

No. 1, 1" to 1½" $ .75 per set net
No. 1, 2" ..... 1.25 per set net
No. 2, 2½" to 4" 3.60 per set net

To the Oil Men of the U. S. A.
Fellow Citizens:

The other night we went out to dinner at a fellow's house—that is, at his wife's house. If you want to know what a good cook your own wife is, try some other woman's cooking. My wife can make waffles that taste like another woman's angel food.

Sometimes I wish that some women would take more cooking lessons and less bridge ones. I know a lot of women who are a lot more careful what they do to their partner's ace than they are what they do to their husband's stomach.

And, honest, you would have thought that it was the other fellow who was invited, instead of me, he was so tickled. He was as pleased as I am when I get an order from one of you fellows. He pranced around like a mustang with a burr under its tail.

I could see right away that his wife had told him beforehand what to do and what not to do, because he didn't do what she had told him to, and was always doing what she had told him not to do. Talk about informatory bids! She sent out more signals than a ship afire at sea.

But there is one nice thing about having company: you get a napkin. And your wife is as pleasant as a fellow trying to explain something to a crossing cop. She says "my dear" when what she is thinking is "my gosh."

But if those folks ever have a fire, they ought to send at once for my wife. They may not have an inventory of their furniture, but my wife has. She knows everything they have, where they got it, and how much it cost. She told me after we got home.

That is, she started to, but I didn't have time to listen. I wanted to get down to the refrigerator and see if I could find something to eat. The salad was nice, but I'm no rabbit. My wife told me how lovely the decorations were—and how cheap—but you can't eat the decorations.

There is nothing like dining out to make a man realize what a good home he has. There's no place like home, just the same as there are no tools like Nye's. If you want to save your stomach, eat at home. If you want to save time and money, use Nye Tools.

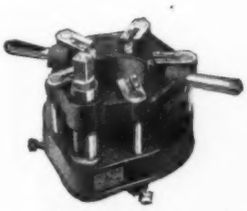
Yours for less bridge and more breakfast,

HARRY G. NYE
Otherwise Known As
THE NYE TOOL & MACHINE WORKS
4120-30 Fullerton Avenue
Chicago, Ill.

(Copyright, 1927, by Harry G. Nye. All rights reserved)

Nye Barnes Pipe Cutters

No. 1 .....$ 2.25 net
No. 2 ..... 3.00 net
No. 3 ..... 5.00 net
No. 4 ..... 10.00 net
No. 5 ..... 15.00 net
No. 6 ..... 20.00 net



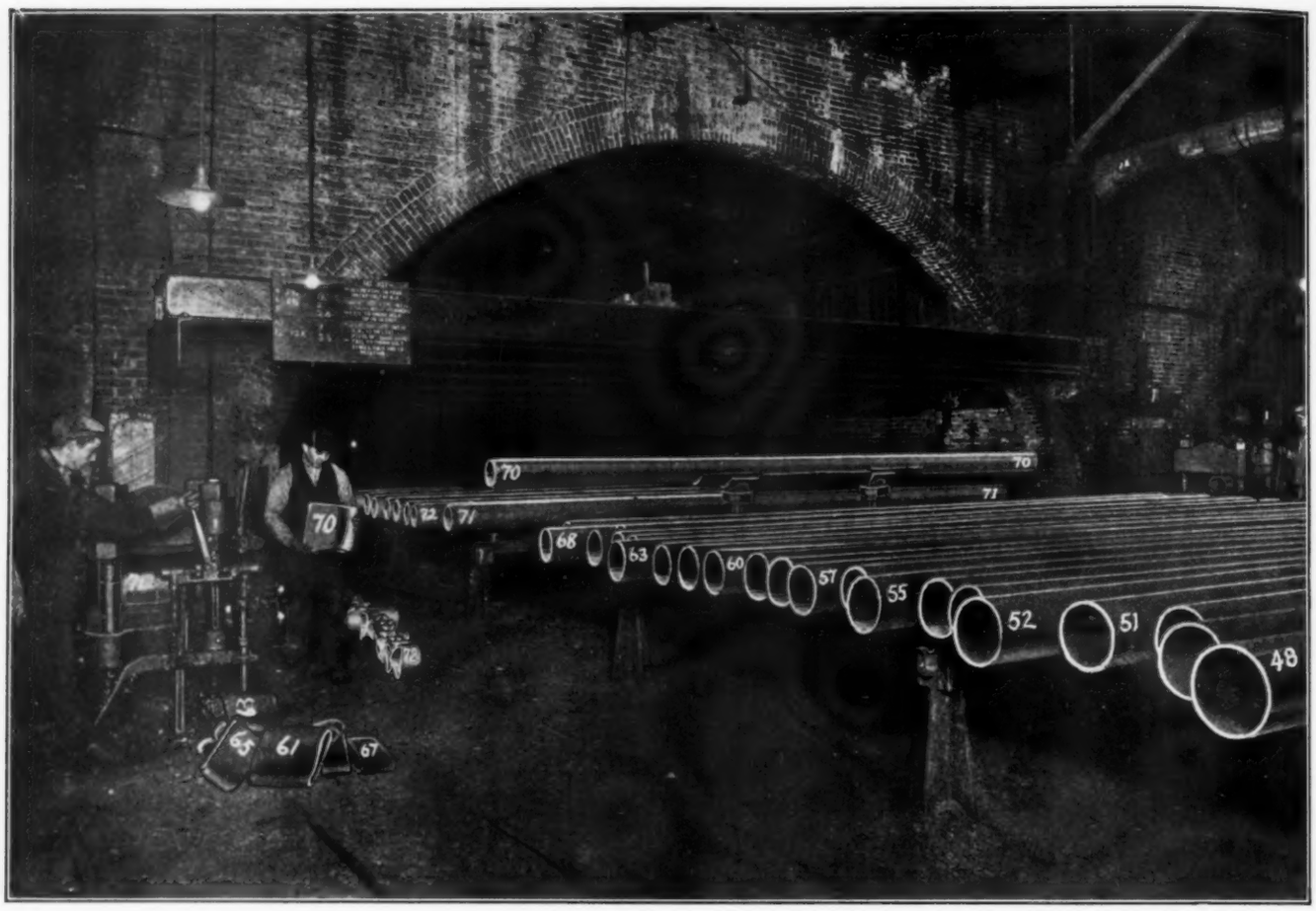
NYE NO. 2
Geared Threading Device Improved

Capacity 2½ to 4 in. inclusive
Net price complete $50.00
West of Rocky Mountains .. 55.00
FREE TRIAL—ABSOLUTELY GUARANTEED

Nye thin blade cutter wheel, made to fit all standard makes of pipe cutters, and guaranteed against breakage in use. Made both in smooth and knurled edge.

Nye Saunders Pipe Cutter

No. 1 .....$ 1.80 net
No. 2 ..... 2.70 net
No. 3 ..... 6.60 net
No. 4 ..... 10.80 net
No. 5 ..... 16.80 net



The Same Test That Railroads Use In Buying Rails

Every length of Chester Casing, Pipe and Tubing must pass the Crop-End Test. Both crop ends are crushed and examined as an additional important physical test to check the character of weld and metal of each length of pipe.

By the system of duplicate numbers on pipe and crop ends, identity is immediately established. Rejects are returned to the mill for retesting or rejection.

The usual method of testing and checking heavy duty material is to take a small percentage of the number of pieces for test purposes. South Chester Tube Company goes to the extreme of making two tests of each length which represents a 200% check. This is but one of the means Chester employs to insure 100% satisfaction in its product. The wide use of Chester Products is evidence that the value of these tests is appreciated by the trade.

South Chester Tube Company

CHESTER, PENNA.

Pittsburgh New York Houston Tulsa Los Angeles

Also makers of Wrought Iron Casing from 4½" to 12½"

District Sales Managers:

W. E. Gibson,
801 Columbia Bank Bldg.,
Pittsburgh, Pa.

P. N. Guthrie, Jr.
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New York City

J. P. Cooney
710 A. G. Bartlett Bldg.,
Los Angeles, Calif.

E. H. Bosches
2024 Houston Post-Dispatch Bldg.,
Houston, Texas

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Mannington, W. Va.
Mather and Waynesburg, Pa.
Petroleum Supply Co.
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Norphlet, Ark.
Kane Supply Co.
Kane, Pa.

Wagner Supply Co.
Fort Worth, Cross Plains,
Breckenridge, Best,
Amarillo, Borger, Brownwood,
and Odessa, Texas

United Oil Well Supply Co.
908 A. G. Bartlett Bldg.,
Los Angeles, Calif.

Great Northern Tool & Supply Company,
Kevin, Mont.—Kemmerer, Wyo.

Midland Iron Works
Billings, Mont.
Hillman-Cooney, Inc.
1118 Santa Fe Ave.,
Los Angeles, Calif.
Warehouses at:
Houston, Texas; Norphlet,
Arkansas; Thenard, Calif.

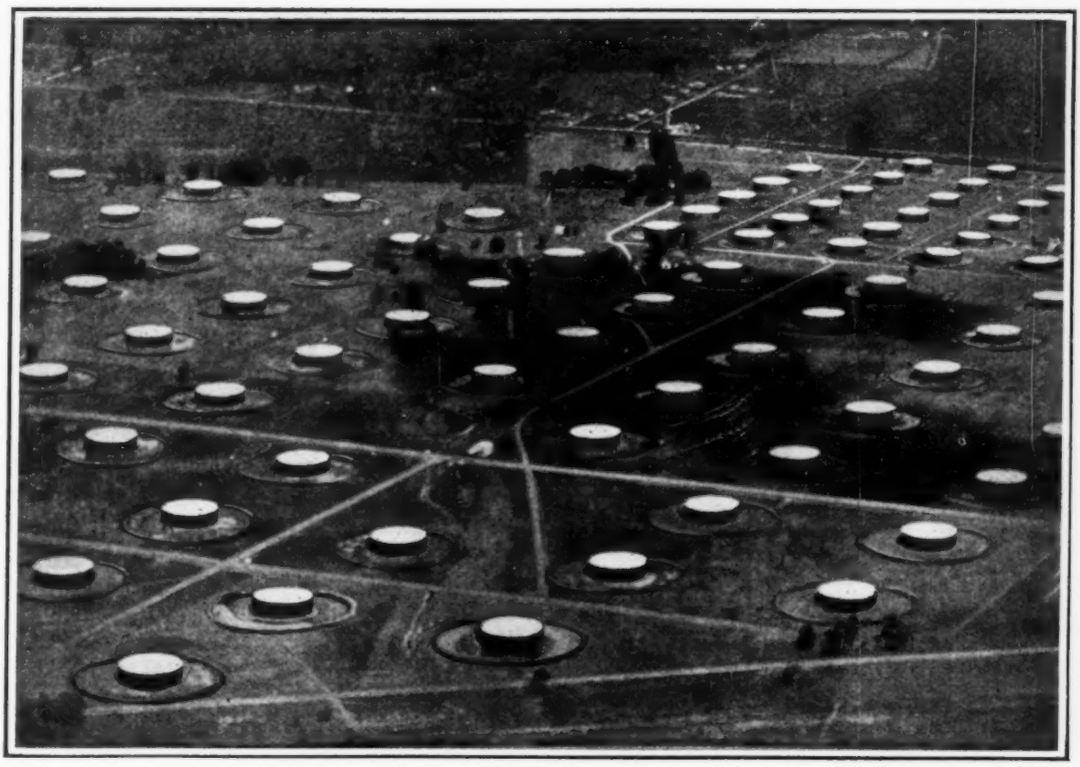
CHESTER

SPECIALISTS IN CASING FOR DEEP WELL DRILLING

STEEL CASING

Over 50,000,000 Bbls.

storage capacity now protected



by Johns-Manville vapor-tight insulated tank tops*

*Patented. Other patents pending

JOHNS-MANVILLE

Oil Industry Department

JOHNS-MANVILLE CORPORATION
MADISON AVENUE AT 41st STREET, NEW YORK

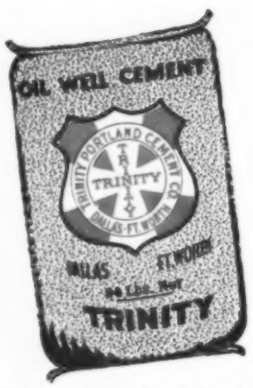
Asbestos and its allied products
INSULATION
BRAKE LININGS
ROOFINGS
PACKINGS
CEMENTS
FIRE PREVENTION PRODUCTS

BRANCHES IN ALL LARGE CITIES. FOR CANADA:
CANADIAN JOHNS-MANVILLE CO., LTD., TORONTO

Say You Saw it in The OIL WEEKLY

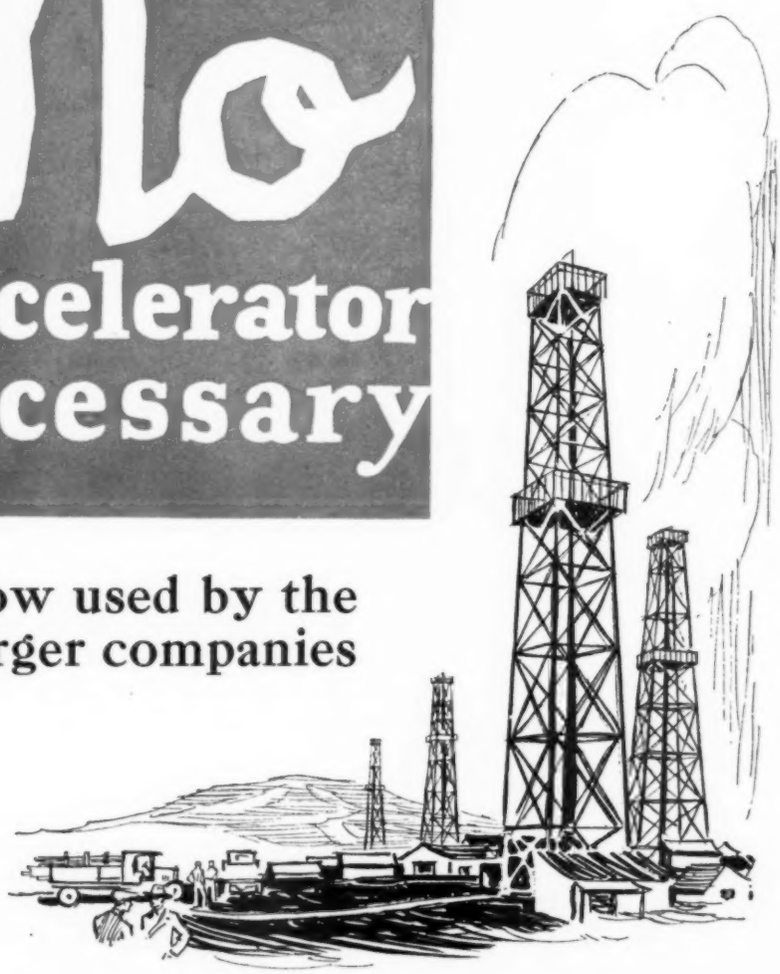
TRINITY
OIL WELL CEMENT

'No Accelerator Necessary



Now . . . ready for immediate shipment. Packed in distinctive, extra-heavy, water-proof green bags. Information gladly supplied those interested.

now used by the larger companies



TRINITY PORTLAND CEMENT CO.

DALLAS :-: FORT WORTH

From the Mid-Continent Field to Far Off Roumania, Oil Men Swear By SPANG WELDLESS JARS

THE world-wide confidence of oil men in Spang Weldless Jars is based on true merit and consistent performance.

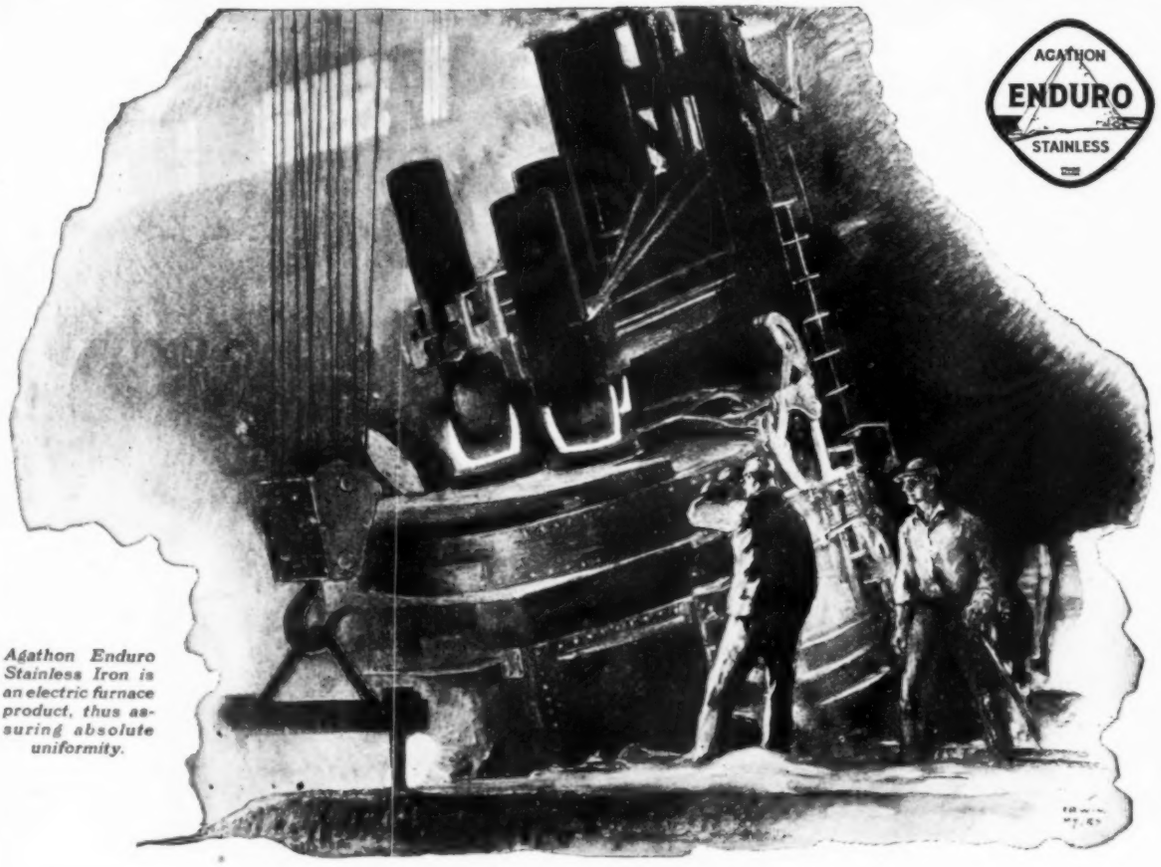
Hundreds of letters from pleased oil operators bear true testimony of the endurance of Spang Jars. Steady repeat orders from all parts of the world is further evidence that Spang Jars are consistently making good in every form of strata from granite to pyrites of iron.

All of these regular users discovered the many advantages of Spang Jars by trying them *once*.

We ask you to do the same. Over 300 supply houses throughout the oil fields carry complete stocks of Spang Jars—Try a set today.

SPANG AND COMPANY
BUTLER, PENNA.

Sold By All Leading Supply Houses



Agathon Enduro Stainless Iron is an electric furnace product, thus assuring absolute uniformity.

Enduro Stainless Iron

Defies the Attacks of Sulphides and Sulphur Compounds

WITH the introduction of Agathon Enduro Stainless Iron, maintenance and repair costs in cracking plants can now be greatly reduced. This remarkable iron resists the attacks of sulphides and sulphur compounds and is ideal for seamless tubes and other metal parts in places where these compounds are present.

Agathon Enduro Stainless Iron has not only greater strength at ordinary temperatures, but will withstand much greater pressures at operating temperatures. It is easily worked—can be readily machined, forged or drawn—and yet possesses a hardness that resists wear and abrasion.

Get the assistance of our metallurgists in adapting this metal to your requirements. This service is free.

Agathon Enduro Stainless can be — Spun, Forged, Welded, Riveted, Machined, Cold Worked.

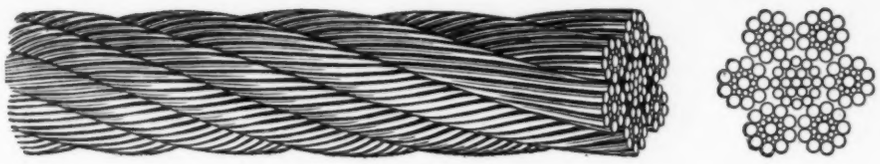
Agathon Enduro Stainless resists—Abrasion, Nitric Acid, Alkali Solutions, Moist or Sea Air, Super-heated Steam, Fruit and Vegetable Acids, Scaling at High Temperatures, Sulphides and Sulphur Compounds.

Central Alloy Steel Corporation, Massillon, Ohio

Makers of Agathon Alloy Steels

Cleveland, Syracuse, San Francisco, Detroit, Philadelphia, Chicago, Los Angeles, New York, Tulsa, St. Louis, Seattle, Cincinnati

AGATHON ENDURO STAINLESS IRON



Use Wickwire Spencer Wire Lines

High quality equipment is essential to the economical operation of oil refineries. Wickwire Spencer Lines for pulling coke out of stills in refineries make satisfaction certain.

They are made from 3/4" diameter bright plow steel, composed of 6 strand, 19 wires to the strand (Seale patent construction), right lay with 19 wire center. Extra heavy galvanized thimble spliced in each end of each piece. They are furnished in any desired lengths.

Address your inquiries to us direct or through any of our distributors.

WICKWIRE SPENCER STEEL COMPANY

General Offices: 41 East Forty-second Street, New York

Distributors

EASTERN OIL FIELDS

Slicker Pipe & Tool Co., Knox, Pa.

A. F. Keck Company, Butler, Pa.

Lloyd Smith Co., Bradford, Pa.

McDonnell Brannen Co., Boliver, N. Y.

H. B. Mitchell Co., Emlenton, Pa.

J. S. Young, Jr. Lawrenceville, Ill.

G. A. Blair & Sons, Clintonville, Pa.

New Martinsville Supply Co., New Martinsville, W. Va.

Elms Brothers, Waynesburg, Pa.

Penn Pipe & Supply Co., Sheffield, Pa.

Leidecker Tool Co., Marietta, Ohio

Wooster Tool & Supply Co., Worster, Ohio

Lawrenceville Machine Co., Lawrenceville, Ill.

Diamond Supply Co., Charleston, W. Va.

MID-CONTINENT OIL FIELDS

Murray Tool & Supply Co., Tulsa-Cleveland, Okla.

STOCK LOCATIONS IN:

Federal Supply & Machine Co. Augusta-Winfield, Kansas

Pampa, Borger, Roxana, Best, McCamey, Eastland, Trent, Vernon, Texas

ROCKY MOUNTAIN OIL FIELDS

Great Northern Tool & Supply Co., Kevin, Montana

Midland Iron Works, Billings, Mont.

Leidecker Tool Company, Casper, Wyoming

CALIFORNIA OIL FIELDS

Geo. J. Hausen, Inc., Los Angeles-Taft-Wilmington, Calif.

WICKWIRE SPENCER PRODUCTS

WICKWIRE SPENCER STEEL CO.,
Dept. 617-OW 41 East 42nd St., New York City
Please send me Catalog showing Wickwire Spencer Drilling and Wire Lines and the name of your nearest distributor.

Name.....

Address.....

Quicker~Better than Rebuilding

The Phipps Core Bit

The Phipps Two-Piece Core Bit, with its simple, inexpensive renewability, has eliminated a great deal of the grief of coring, and particularly so in wildcatting, or where facilities for rebuilding are not readily available.

The Phipps Two-Piece Bit has all the same core retaining features of the standard one-piece bit, with the important and outstanding advantage of quick and economical renewability—really cheaper than rebuilding, and at about one-third the cost of a new one-piece bit. Can be rebuilt with the electric arc or acetylene torch if desired. It is made of forged steel and not cast steel.

Descriptive Literature on Request

H. C. SMITH MANUFACTURING CO.

Whittier, California

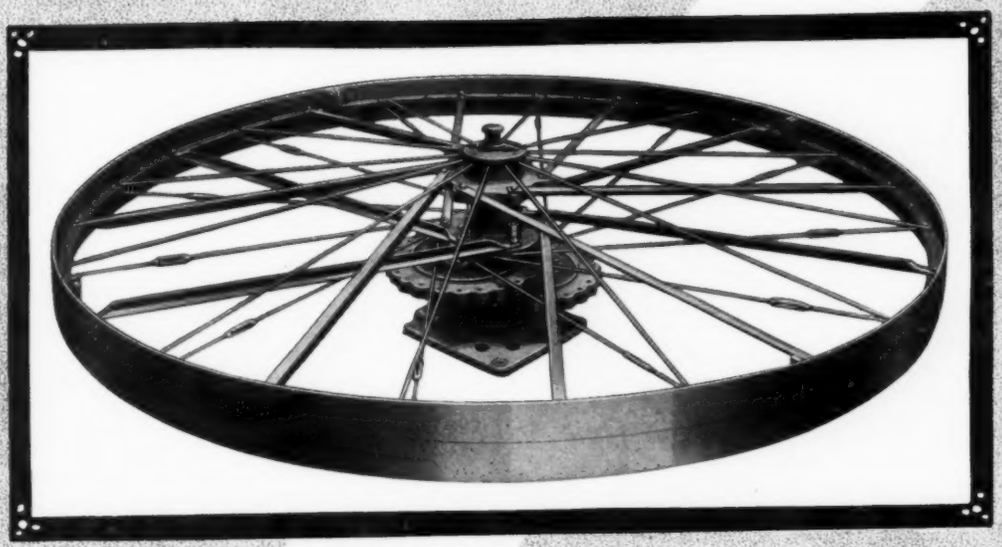
Branch Offices and Warehouses:

Taft, California — Ventura, California

Harry B. Shine, Sales Agent, 2408 McKinney Ave. Houston, Texas.

All Supply Houses

TICO BAND WHEEL POWERS



The new Tico 18 and 20 foot Band Powers have the greatest assembly of exclusive advantages ever assembled in a single piece of oil field equipment.

For Example:

The Band Wheel Rim is made of rolled steel angles riveted together forming a crown that holds the belt in position—an exclusive Tico feature.

It is the stiffest rim ever used on band wheel powers maintaining perfect roundness under all belt loads.

The driving angles are arranged on the bicycle principle giving the most efficient type of hub drive.

The shaft has a long bearing in a base, allowing rim and shaft to be withdrawn from base without dismantling. Eccentrics can be changed without causing a shutdown.

The Tico Power is provided with a dual oiling system—both force feed and gravity feed.

Tico Powers are equipped with belt tighteners.

Every progressive oil man will find it profitable to investigate the Tico Power—it has many other advantages.

See Your Continental Supply Man Today.

The TITUSVILLE IRON WORKS Co.
TITUSVILLE - PENNA.

SOLE DISTRIBUTORS

The CONTINENTAL SUPPLY COMPANY

For THE CONTINENTAL
72-76 Trinity Court

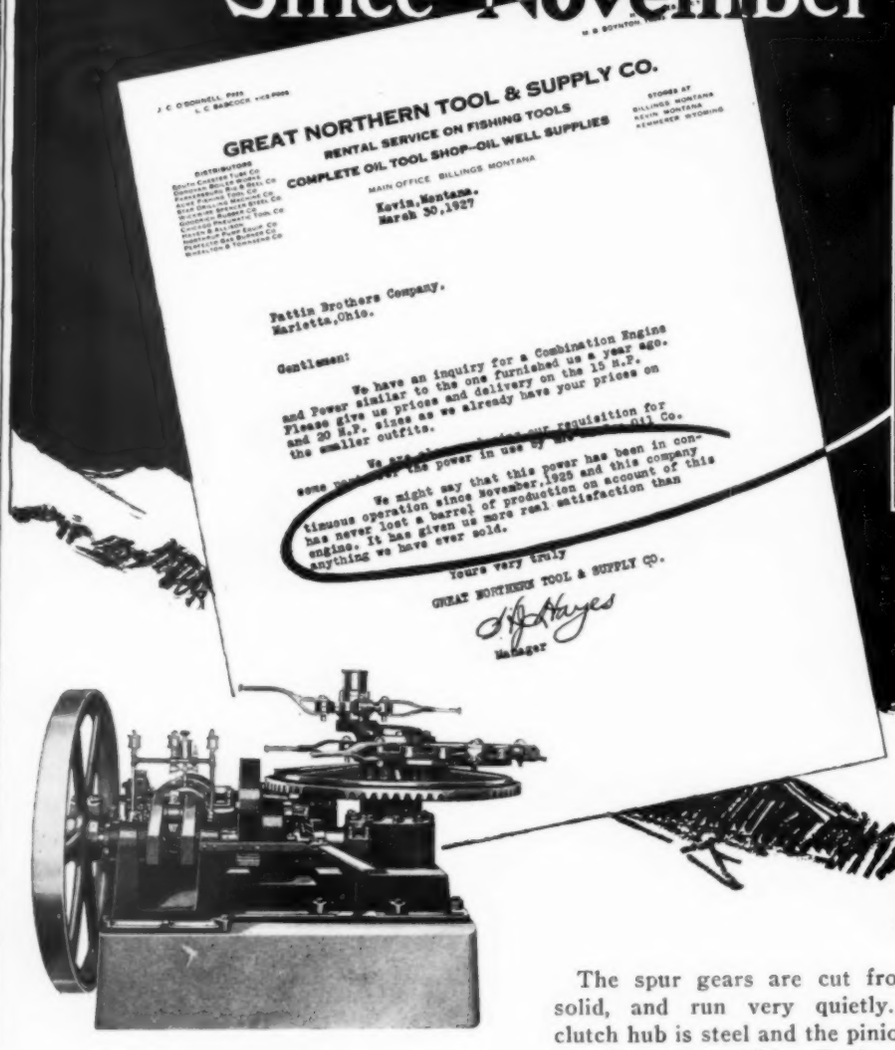
Export WELL SUPPLY CO.,
New York City, N. Y.

Titusville
Acme Boilers
Single and Twin
Steam Drilling Engines
Tico Gas Engines
Band Wheel and
Geared Powers

Titusville
Acme Rotaries
Acme Swivels
and Speed Draw Works
High Pressure Boilers
Crown Blocks
Mud Pumps

RUGGED - ENDURING

Continuous Operation Since November 1925



GREAT NORTHERN TOOL & SUPPLY CO.
RENTAL SERVICE ON FISHING TOOLS
COMPLETE OIL TOOL SHOP—OIL WELL SUPPLIES
MAIN OFFICE BILLINGS MONTANA

Kevin, Montana.
March 30, 1927

Pattin Brothers Company,
Marietta, Ohio.

Gentlemen:

We have an inquiry for a Combination Engine and Power similar to the one furnished us a year ago. Please give us prices and delivery on the 15 H.P. and 20 H.P. sizes as we already have your prices on the smaller outfits.

We might say that this power has been in continuous operation since November, 1925 and this company has never lost a barrel of production on account of this engine. It has given us more real satisfaction than anything we have have ever sold.

Yours very truly
GREAT NORTHERN TOOL & SUPPLY Co.
H. J. Hayes
Manager

"....this power has been in continuous operation since November, 1925, and this company has never lost a barrel of production on account of this engine. It has given us more real satisfaction than anything we have have ever sold."

This is the type of power referred to in the above letter from the Great Northern Tool & Supply Company. It is a combination, geared power made in three sizes, 12 H. P., 15 H. P. and 20 H. P.

It is a unit fitted with an eccentric and disc, practically a double eccentric power, and direct connected to our standard 4-cycle gas engine.

The spur gears are cut from the solid, and run very quietly. The clutch hub is steel and the pinion gear cut from the solid. Engine crank shaft has an O. B. bearing cast on the bed plate and is self contained.

Lever clutch mounted on engine shaft, is fitted with wood shoes, and will carry the heaviest of loads without slipping.

The engine is fitted with Wico igniter, but if preferred, a tube ignition can be furnished.

PATTIN PRODUCTS

- Gas Engines
- Pumping Powers
- Water Pumps
- Air and Gas Compressors
- Vacuum Pumps
- Oil Country Boilers
- Torpedo Reels and Clamps
- Steel Storage Tanks
- High Pressure Tanks
- Howe Casing Heads
- Shackle Irons

Write for prices, or inquire of any of our representatives.

The Pattin Brothers Company

MARIETTA, OHIO

Tulsa, Okla.	Nowata, Okla.	Wichita Falls, Texas	Putnam, Texas	Bradford, Pa.
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Hang Your Rods Out of the Way And Out of Danger

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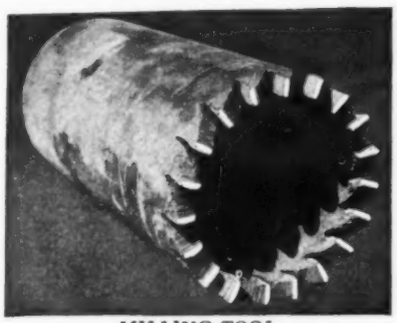
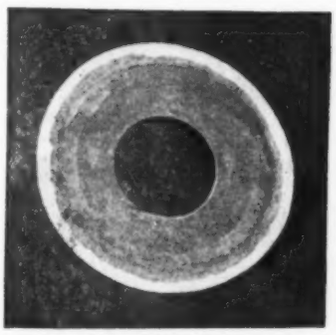


MILLING TOOL

FISH TAIL BIT



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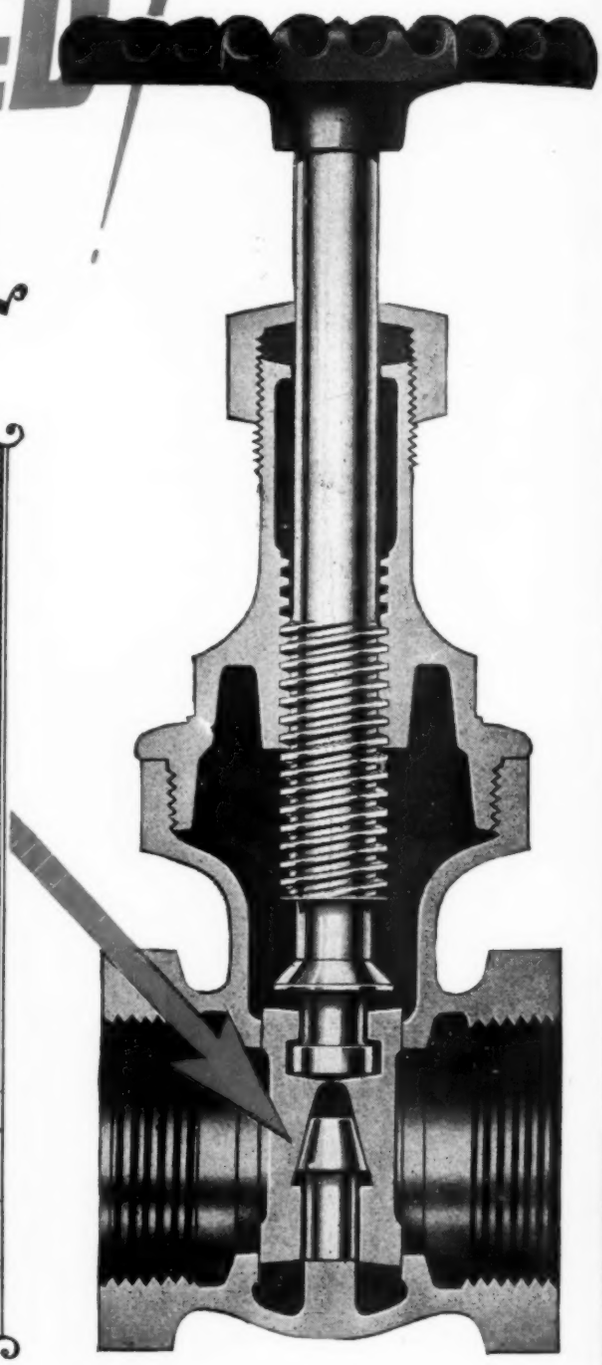

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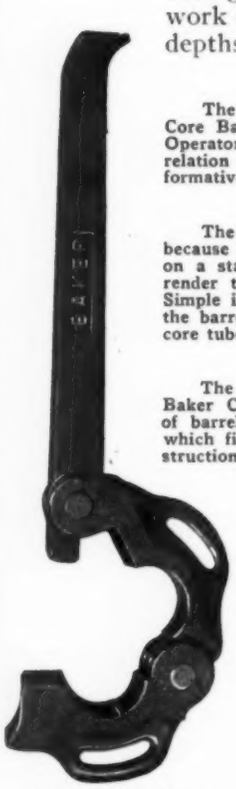
The Baker Hydraulic Core Extractor was designed to extract cores from the Baker Cable Tool Core Barrel, but may be used in connection with any other type of barrel. It comprises a two-stage force pump, with a sub connection, one end of which fits the pump and the other the core tube. The entire device is simple in construction, has been thoroughly tested out and has rendered the very best service.

Baker Standard (Cable Tool) Core Barrel



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GULF PUBLISHING COMPANY

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Edited Weekly at Houston, Texas SPENCER W. ROBINSON, *Editor*

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This elevator does not lift the casing by the top coupling, but has movable slips which work within a heavy steel bowl, engaging the casing and carrying all the load.

All slips are extra long, of correct taper, interlocking and self-aligning. They will engage the outside wall of any make of casing without danger of slippage or crushing, and they release easily.

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FIG. 3

FIG. 2

FIG. 1

Fig. 1 shows the complete elevator with slip hook engaged and with slips raised ready to be placed over or to be taken off the casing. To attach elevator to casing, lower it over top of casing until bracket rests on casing coupling, as shown in Fig. 2. Lowering a little further will automatically disengage the weighted slip hook. Then raise elevator until bowl comes up over slips, as shown in Fig. 3. To detach elevator from casing, lower it and place weighted slip hook in ring on top of bracket, then lift off over to top casing.

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Crude Market Strength Stimulated As Production Slumps

Rumors of premiums in Mid-Continent not confirmed but offer encouragement—weather helps refined products

By SPENCER W. ROBINSON

A NUMBER of bright spots appear in the crude market picture this week that give promise of acquiring additional cheerfulness through the remainder of the month. Rumors of premiums in the Mid-Continent, following closely upon predictions that the Seminole area has now passed its peak, offers encouragement to operators in this section while a heavy movement of Panhandle crude during the past month has left sufficient storage room to, at least temporarily, relieve congestion there.

In the refined market, favorable weather conditions continue to stimulate orders from the north, northeastern and eastern district, while a gradual resumption of business in the Mississippi flood area is being reflected in the movement of motor fuel there.

Seminole, after reaching the high mark of 374,482 barrels a day on June 4, has dropped back to 361,741 barrels for the gauge last Monday, and this in spite of flush production from new wells nearing a high mark. However, added output of new wells was not sufficient to offset the natural decline from the older sections of the Seminole area, as the gas had began to go off in the new Bowlegs section. Restrictions on outside drilling are expected to gain sufficient support to prevent any new flush pool being added to the area.

Buyers in a position to handle oil in large quantities report that they have been unable to make new contracts for a supply of Seminole crude. The same situation is also reported in several other Mid-Continent areas.

The movement of crude from the Panhandle area during the past 30 days has reduced stocks in the field approximately 2,000,000 barrels and at the present rate of runs to storage there is now room available for 100 days' runs.

Seal Beach, in California, offers a slightly disturbing element to the market this week when new production jumped the daily average of the field more than 20,000 barrels. It had been freely predicted that this area had already passed its peak output and this new turn of affairs came unexpectedly.

Mid-Continent

While the rumors of premiums in Oklahoma could not be traced to any definite authoritative source, it is believed that more than one crude oil purchaser has offered more than the present posted price in negotiating contracts now being made for the coming fiscal year.

In any event, there is certainly perceptible in the Mid-Continent just now a strengthening of the crude market, all of the talk of over production notwithstanding. This is particularly true of the Seminole district. It is definitely known that buyers seeking more oil are finding little or none available in the Seminole district.

The crude oil storage situation in the Burbank field is taken by some as partial indication of Mid-Continent market conditions. In this connection, it is interesting to note that Burbank steel storage is only about half full. With a total capacity of some 13,000,000 barrels of storage on the various tank farms at Burbank, operators have only 6,732,597 barrels of oil stored.

The stored oil at Burbank is divided as follows:

	Bbls.
Gypsy Oil Co.	2,620.322
Phillips Pet. Co.	1,175,825
Vacuum Oil Corp.	1,079,825
Mid-Continent Pet Corp. (Cosden)	525,603
Phillips Pet. & Texas Co.	441,679
Prairie Oil & Gas Co.	396,351
Skelly Oil Co.	186,778
Roxana Pet. Corp.	160,699
Mid-Kansas Oil & Gas Co.	146,154

Mid-Continent Refined Market

The consumption of gasoline and other refined products is steadily increasing and the refined market has been in a better condition during the past few days than it has been for several months. Export buyers are active. The more or less general warm weather which has obtained in the north, northeastern and eastern districts showed its effect by the large number of buying orders which appeared over the week end.

The daily average production of crude for the week ending June 11 registered a slump of 6850 barrels, according to estimates of the American Petroleum Institute. This drop resulted from a drop in the Texas Panhandle sufficiently large to offset a sudden increase at Seal Beach, while other sections generally over the United States, with the exception of North Louisiana, showed a downward tendency.

Only a slight increase was shown at Seminole during the week, and it was overcome by decreases in other Oklahoma fields to the extent that the State as a whole showed a decline of 800 barrels in daily average. Kansas was down 1000 barrels and Arkansas dropped 1250 barrels. The Gulf Coast country underwent a decline of 1200 barrels, the Eastern States territory 1500 barrels and the Rocky Mountain area 1850 barrels. The latter was due altogether to a drop in Salt Creek production for the week.

North and Central-West Texas increased slightly during the week, tending to hold up part of the drop of more than 10,000 barrels in Hutchinson County. Crane-Upton County production rose 4850 barrels during the week, representing the largest fluctuation upward in Texas fields.

Bulcher Field Extended

Wichita Falls, Texas.—Extending the Bulcher field, Cooke County, one-half mile to the South, the Pure Oil Company's J. C. Embry 1, swabbed 20 barrels 40 gravity oil per hour from sand pay at 1402-1408 feet. Offsets are being started by Sun, Roxana and Kewanee Oil & Gas Company.

DETAILS ON CRITICAL FIELDS

Pool—	Oil Wells Completed	Total Initial Production	Initial Per Well	No. Producing Wells	Daily Production Barrels	Daily Production Per Well	Rigs Up	Wells Drilling
PANHANDLE—								
Hutchinson County	993	524,270	528	930	100,965	109	14	122
Carson County	155	52,580	339	142	11,900	84	..	25
Gray County	139	41,410	298	135	11,735	87	14	33
Wheeler County	35	12,740	365	33	2,295	70	3	19
Totals	1,322	631,000	477	1,240	126,895	102	31	199
WEST TEXAS—								
Church & Fields	75	73,020	974	71	35,635	502	16	39
Gulf-McElroy	22	24,495	1,113	22	11,090	504	8	4
Totals	97	97,515	1,005	93	46,725	502	24	43
OKLAHOMA—								
Seminole District	572	730,906	1,277	517	361,741	699	43	410
CALIFORNIA—								
Seal Beach	93	149,187	1,604	72	71,540	993	58	101

"Must Adopt Standardization in Effect Or it Will Fail"—Lucey

An interview with Captain J. F. Lucey

By R. L. DUDLEY

COLORADO Springs, Colo.—"Standardization of oil field equipment is going to fail unless it is adopted in effect as well as in conversation" declared Captain J. F. Lucey, National Chairman of the American Petroleum Institute committee on standardization of rotary drilling equipment Tuesday at the Broadmoor just before the opening of the business session of the A. P. I.

"If we feel satisfied with what has been done, unless we wake up to the fact that the A. P. I. Standards must be not only adopted by the Institute but adopted and used by the oil producing companies, the standardization has failed" he continued. Captain Lucey stated Tuesday that he expected to offer suggestions to the general standardization committee looking toward field meetings at which field superintendents, foremen, drillers, etc., will be invited and at which well qualified speakers will go into detail on standardization work. "Unless the men who use the equipment as well as the men who buy it are thoroughly acquainted with standardization and sold on it, standardization will not meet the success that our work on it merits," he declares. "A tremendous amount of thought and work have been put into standardization but I find that comparatively few companies are actually standardizing on A. P. I. equipment."

Here he gave definite data on companies who answered questionaires regarding their use of A. P. I. equipment. Some of the companies said that they had used some A. P. I. standardized equipment but had not re-ordered "for no reason as far as we can find" the company purchasing agents had written him.

Others simply said that they had never given A. P. I. standardized pipe a trial, while still others said that they had used it and were well pleased. One Mid-Continent company stated however that they had found that the use of A. P. I. casing would cost them a considerable amount more than the old sizes they had found by investigation.

In checking up the matter Captain Lucey found that the difference in cost was caused by the desire to secure larger clearances for deep drilling. "I believe that the big trouble is that the men who use the equipment as well as the executives of other companies are not acquainted with standardization" continued Captain Lucey. "What we should do is to call field meetings and tell them about it."

He has certain definite plans worked out thus far involving a speakers committe which probably will be brought before the A. P. I. meeting here.

"Selling" Standardization to Field Keynote at Colorado Springs

By KENT RIDLEY

Colorado Springs, Colo.—Thanks to the technical men of the oil industry and manufacturers representatives who have worked on the several committees on standardization of oil field equipment was expressed by President E. W. Clark of the American Petroleum Institute in his address opening the third semiannual conference of the committees which opened here Wednesday morning. More than one hundred committeemen and visitors had registered previous to the opening of the session and it is expected that this number will be increased by late arrivals.

As has been indicated by advance announcements of the session the work in hand at this meeting is to check the performance of items made to the specifications previously worked out by the committees and devising ways of obtaining more universal adoption of the standard equipment through interesting the cooperation of the men in the field.

Preliminary meetings were held by a number of committees and sub committees Tuesday at which reports were put in final shape for presentation to the full committee sessions and the general sessions of the joint committee.

Immediately following the president's address which was delivered before a group session of all the committees the several committees went into conference on the problems assigned to them individually to hear reports of sub-committees from which will be compiled the final reports of committees which will be presented at a general session of the joint committee on standardization on the third day of the conference.

A number of technical papers are scheduled to be presented along with these reports and the general discussion it is hoped by J. Edgar Pew, general chairman of the committee on standardization will be directed toward plans for more complete adoption of the standards by operators. It is planned that a systematic method of standardization education can be worked out to include organization in the several producing districts of committees which will include field men and engineers as supplementary committees to the national committees which are now organized and acting.

Interest in the golf tournament which is scheduled for the fourth day of the standardization conference has been heightened by display of the president's trophy donated by E. W. Clark. This trophy is a handsome silver service consisting of a two quart "soft drink" mixer with six goblets and large tray and is offered for low net score. Eighteen minor prizes are also offered in the tournament.

Golf is vying with the more serious purpose of the meeting and the majority of committee members and visitors are spending the bulk of spare time on the links although the weather is described by the natives as "unusual". Those remaining over for the tournament will be guests at a golf dinner which will be the concluding event of the conference on Saturday night.

Standardization Work Has Helped to Teach Industry Cooperation

Credit is given to men who have devoted time and energies to perfecting mechanical department

By E. W. CLARK
President, American Petroleum Institute

Colorado Springs, Colo., June 15.—Since the war, more of governmental and industrial effort has been devoted to seeking out the world's resources of petroleum than to any other field of industrial enterprise. The present critical situation is not to be considered in terms of Seminole, Earlsboro, Spindle Top, Panhandle or any other momentarily flush areas. We need at this time to take a world view, to think in terms of a decade or a generation, not of a few months or a year.

Task of Standardization

It is indeed gratifying to be called upon to say something in the way of an opening address to you gentlemen who are gathered here today to carry on the serious business of standardizing oil country equipment.

When you started to work the tools, equipment and oil country goods were a wilderness of individual effort. As an Institute we are proud of the fact that an integral part of our organization has been so successful in its efforts in the short time you have been working. The entire industry is grateful to you. The hardest thing that you had to do was not to standardize or simplify your equipment. This was an easy matter in comparison with the change in the mental habits of the industry. It was, therefore, perfectly natural that in the beginning the principal manufacturers of equipment should have been opposed to anything you proposed to do. It is not to their discredit that this should have been their position. Each one of them knew that he was making good equipment and that it would work satisfactorily.

You had the good fortune to start right under sound leadership. Huge sums of money will be saved to the industry, the equipment manufacturer, distributor, and the oil consumer. I believe that they will be of such a substantial character that had the Institute done nothing other than standardization work, the entire expense of Institute organization in carrying on since its inception would be fully justified. But it must be understood that this statement does not in any manner minimize the satisfactory results had in other divisions of our activities.

Learning to Co-operate

The men of the oil industry are being schooled in co-operation. As we become educated to its advantages we will do more; and it will be worth all we pay. The Institute plans many more co-operative activities which, in time, will cover every phase of petroleum activity susceptible of co-operative work. You men are furnishing some of the blackboard illustrations of what can be done and how.

The general object of all business is to get and furnish commodities to satisfy the public's requirements. American industry is trying to conduct its business under a regime of untrammelled competition, with as much freedom of action and non-interference from government as possible, upon the accepted theory that only thus can industrialism reach its apex of efficiency. The oil industry is no exception. We assert that the law of supply and demand controls our industry and the units engaged in it. Price must rise as long as demand is in excess of supply, and must fall as long as supply is in excess of demand. Price must move up or down until some figure is reached which equates supply and demand.

"An economic order in which the regulative mechanism was efficiently operative for short periods only—being every now and then completely thrown out of gear, so that a highly disordered state of things ensued—would be considered by everyone seriously defective, if not unendurable. An economic order to be really satisfactory, ought to show steadiness, regularity, dependableness—ought to be free from all marked perturbations. Now in this respect, our system unfortunately does not work so well as we might desire. It is a familiar fact that production is subject to marked, almost violent, fluctuations, which naturally group themselves into the so-called industrial cycle; depression, recovery, increasing activity, normal activity, over-trading, crisis, collapse, depression, and so around again."

The paragraph which I have just read you is not my own language. It was not written to describe the oil industry. It is quoted from the chapter on production efficiency of a modern textbook on "Principles of Economy." The oil business is experiencing one stage of the industrial cycle; the regulative mechanism of production is out of gear and a highly disorganized condition exists. We cannot escape the fact. As the economist aptly says: "Now, in this respect, our system does not work so well as we might desire."

We operate under a competitive system; and while there are admitted economic wastes under such a system, there is no power to alter, over-night, the fundamental law or the underlying principle. That there is such power is commonly and frequently overstated. Producers and refiners of oil may, at times, gain much by reducing or checking output. The most effective procedure obviously would be through concerted action of all producers or all refiners, because it is the limitation of total output which counts most. Concerted action of such character, however, contradicts the very essence of our present law and procedure; and if practiced for the avowed purpose of market stability, it results only in prosecution and public condemnation—two things from which all men shrink.

The Industry's Methods

The present system of oil production was not designed deliberately by anyone. It is not some prearranged co-operative thing. It is but an automatic development of the conditions as they become known, surrounding production, plus the spontaneous and perfectly normal outgrowth of the private commercial enterprise which oil men ever had demanded as their right and need. We soon find out when we are over-stocking and over-supplying the oil markets of the world, and we know that competition for gallonage should instantly cease where economic advantage leaves off and financial sacrifice begins. Yet we go merrily along, doing over and over again things which we know in advance will surely produce over-supply.

What do we learn when we drill an oil pool in a hurry? Is it that the more wells we drill at the same time the more oil we get at the least cost? Hardly! On the contrary have we not learned:

1. That the more wells we drill at the same time the greater the per-barrel increase in the cost of the total oil recovered from the pool.

2. That the more wells we drill at the same time, the more gas pressure is immediately released, thereby dimin-

ishing the total oil recovery, because maintenance of gas pressure increases the rate of yield and the total amount obtainable!

Danger of Over-Producing

3. That the more wells we drill at the same time, the greater the likelihood of bringing to the surface a quantity of oil which will be forced on an over-supplied market at such a low price as "leads to wastefulness and disregard of essential values."

Knowing all this, why do we do these things? We time and time again exhibit a Ph. D. degree to prove our intellectual capacity to co-operate in work we ought not to do. Why can we not get a correspondence course degree for co-operation in things where we ought to work together?

When a man installs a plant to heat his house he has it designed to meet the peak of cold weather load. Does he change his plant to fit every condition of weather? Of course not! He regulates the quantity of fuel he feeds it. He does not unendurably overheat his house in summer by piling on fuel. That would be ridiculous.

In the oil business, we have a system of production which has grown out of our experience. It is our heating plant. The industry wants to follow correct principles of economics and the physical laws which control operation. Every time we stokers go out and stoke the furnace with fuel when weather conditions do not require it, we have violated both an economic and physical law. We unendurably overheat things, and money pours out the pores of the industry's skin in rivulets of gold.

Production has run around the industrial cycle because the last lesson did not stick and we operators failed to check or limit our individual activities until so late none of us seems wise enough or powerful enough to stem the flood. So, knowing nothing else to do, we cuss the business, its so-called leaders, and the government. Since we cannot change our system overnight to meet the situation, there is nothing left save to try to run the system a little easier and a little slower, while we are cooling off from the work of the over-zealous stokers.

Counsels of Caution

For what they may be worth in the discussion now going on, I have a few general observations to make.

1. Let us seek the real meaning of an industry co-operating; get the real spirit of it, and then practice it.

2. Get a copy of "The A B C's of Science in Oil Recovery," which the Institute has obtained from an eminent physicist and published in pamphlet form; sit down, read it, and do some hard thinking.

3. Believe me when I tell you that the Federal Oil Conservation Board, appointed by President Coolidge, has a sincere and earnest desire to help this industry solve its most serious problem! In my judgment, the industry will make an egregious error if it does not embrace the opportunity to work out for itself, with the intelligent co-operation of this agency of government, a permanent national policy with respect to oil production.

As we shall demonstrate ability to co-operate among ourselves, we shall gain in the confidence of the public and of government agencies. Personally, I have no doubt whatever of the genuine wish of government authorities to help our industry, or any other industry that is found in the position we occupy today. I believe all the tendency of the times is toward intimate and genuine understanding and relationship between business and government, to promote the interest of both, which means the welfare of the public.

The Inheritance of Laws

A good many of us think we know procedures and co-operations that ameliorate present difficulties. The trouble with applying them is that we assert we have laws which stand in the way. If so, they have been left over to our time from a period when the popular conception assumed that government and business must almost necessarily be antagonistic. But we have passed on to the time when the ideal of co-ordination, of co-operation, of understanding, of confidence rather than suspicion, is constantly held up before us. The creation of the Federal Oil Conservation Board was an invitation to us. The industry accepted that invitation, and because it did so in all good faith, we have had many testimonies of government's desire to go along with us, to help us work out our problems, to remove obstacles, to modify and ameliorate outworn policies. We will do well to encourage constantly the disposition thus shown.

I do not believe it is too much to hope that a time will come when an industry like ours, confronting the peculiar difficulties that we now face, will be able to lay its troubles frankly and fully, and without fear of unwarranted regulation, before appropriate governmental agencies, and secure measures calculated alike to help us and to promote the true public interest. The men of this industry ought not to be afraid, for fear of injunction and prosecution, to attempt to do the things that simple common sense tells us should be done. The moderation and reasonableness of all the expressions that have come from the Federal Oil Conservation Board convince me that that board sympathizes with this view. Whenever we shall have convinced the government of our complete good faith; and whenever the government shall have convinced industry that it wishes to be constructive and helpful, then, I believe, effective, useful, working co-operations, to the advantage of all concerned, will have been brought in sight. It is up to us to do our part.

Permit me a moment to suggest that the present critical situation in our history is not one to be considered merely in terms of Seminole, Earlsboro, Spindle Top, Panhandle, or any other momentarily flush area. I submit that we need at this time to take a world view, to think in terms of a decade or a generation, and not of a few months or a year.

Outlook for Future

Less than 20 years ago Russia produced more petroleum in a year than the United States. With the epoch of turbulence and revolution, Russia sank to unimportance, while the

(Continued on page 82)

Oxford Townsite Pool Will Produce From Stalnaker Sand

Oxford, Kans.—The townsite pool here will produce from the Stalnaker sand from 2050 foot level. The Roxana Petroleum Corporation during the latter part of last week, carried its No. 1 Emrich, located on an outlot on the original survey of the city, on down to 2050 feet and have proven the Stalnaker to be productive in this newly opened area. The exact location is center south line sw ne of 14-32-2 in the southwest corner of the Oxford townsite, Sumner County, Kansas.

First oil was found in this sand at 2020 feet and drilling was slowly carried on to 2044 feet, when a little more than one hundred feet of oil stood in the hole. Drilling to 2046 feet the hole started filling up, and was allowed to stand over night and in 11 hours there was 1700 ft of oil in the hole. It was then drilled to 2050 feet resulting in rapid filling of the hole and the start of the flow. There is around 300 feet of open eight inch hole, and because of the appearance of some quantity of shale cavings, drilling has been stopped until a test by swabbing can be made.

It is estimated that the well may be good for 300 barrels or better, in event the well responds to shooting as well as they do in the Churchill pool to the north of the new development. There is a small amount of gas with the oil.

In block 72 of the townsite, Jess Moore is drilling at 200 feet. Tom Fine and others are moving in a rig in block 18. Sharp and others are digging celler in block 40. A number of other operations are expected to be under way in the next few days.

Roxana Petroleum Corporation controls about half of the acreage around Oxford, and the majority of the remaining leases are held by Amerada and Barnsdall.

Gas Line to Coast Will Cost More Than $10,000,000

New concern announces plan for big main to serve Houston, Port Arthur and other points

Houston.—Associated with a group of New York capitalists, Moody-Seagraves interests have announced the construction of a $10,000,000 gas line connecting Houston and other coastal cities with important gas fields in Northeastern Texas and Northwestern Louisiana.

The line will extend from Northwestern Louisiana to Livington, Texas, a distance of 140 miles, where it will branch, one branch going to Port Arthur and the other to Houston. From the point of origin to Livington, the line will be a 22-inch one. The two branches will be 18-inch.

Capacity of the big line will be 150,000,000 cubic feet of gas and it is planned to have 100,000,000 feet come to Houston and 50,000,000 feet to Port Arthur.

A number of franchises for towns along the lines have been secured and others are being obtained now. Surveying parties have already started on the right-of-way, and it is hoped that work on laying the line can be begun within about 40 days.

It is understood that Davis welded pipe is to be used on the line and that the Hope Engineering & Supply Company will do the actual laying of the line.

Gas Supply Assured

In an interview given out in New York, O. R. Seagraves, president of the company, said: "We have acquired half interest in the Reserve Natural Gas Company, owning and controlling approximately over 150 gas wells in Northwest Louisiana, and many thousands of acres of gas producing lands, including the gas rights on all of The Texas Company properties in East Texas and Northwest Louisiana.

"We have also acquired the State Line Oil & Gas properties, which company has at this time 30 producing wells in the famous Waskom field, Harrison County, in East Texas, besides all of the gas interests of Thigpin & Harrold of Shreveport.

"There will be over 200 gas wells connected with this new line in over a dozen gas fields."

A contract has been made by the new company with The Texas Company to furnish gas at the company's mammoth refinery at Port Arthur. Requirements of the refinery will be equal to about 35,000 barrels of fuel oil per day, or 7000 tons of coal.

The pipe line will be known as the Dixie Pipe Line Company. The following men are among the incorporators: W. L. Moody, Jr., president W. L. Moody Company, Galveston; W. L. Moody, president Moody Corporation, Galveston; J. A. Elkins, president Guaranty Trust Company, Houston; S. S. Goddard, president Goddard & Company, New York; W. T. Perkins, vice president Chatham Phoenix National Bank, New York; James R. Miller, attorney, Pittsburgh; O. R. Seagraves, vice president Moody Corporation, Galveston; W. D. Haden, president W. D. Haden & Company, Galveston; B. A. Hardy, vice president State Line Oil & Gas Company, Shreveport, La.

Total length of the line will be between 230 and 240 miles.

Officials of the new company are O. R. Seagraves, president; S. S. Goddard, vice president and secretary. The other men mentioned above are directors

Lone Star Gas Company Buys West Texas Line From Texas Company

Dallas.—Lone Star Gas Company is launching an expansion program of major proportions on its gas distributing system in South Central and West Texas, and will materially increase its gas purchases from producers in the Texas Panhandle, South Oklahoma and Central West Texas. Owners of gas wells in the latter district will be called upon to supply a larger volume of gas to Lone Star next winter as result of the company's trunk lines being extended to Marlin, Temple and Austin, while an extension to San Angelo and intermediate points in West Texas will follow shortly.

The purchase for $2,000,000 of all gas lines, franchises, contracts and equipment owned by The Texas Company in Eastland, Stephens, Callahan, Young, Shackelford and Taylor Counties was made by Lone Star last week, involving approximately 175 miles of six and eight-inch trunk lines. This sale removes The Texas Company from the gas distributing business, and incidentally the oldest gas system in the state, since The Texas Company began selling gas in 1919 from the Moran field. The principal towns served by The Texas Company included Baird, Putnam, Moran, Albany, Cisco, Eastland, Parks, Eliasville and Abilene. The latter town is the furtherest west, and is served by an old six-inch and eight-inch line built several years ago. Lone Star plans to extend from Abilene to San Angelo in a few months, taking in all towns enroute. This extension will require about 80 miles of pipe.

Lone Star Gas Company also recently purchased the entire stock of the Municipal Gas Company, which held exclusive franchises and distributing lines in about 20 cities and towns in North and Central Texas, ranging from Wichita Falls to Corsicana. The Municipal Gas Company was organized and largely owned by officials of the Magnolia Petroleum Company, and was sold late last year to R. B. Stearnes, who is a member of the firm of Arthur Perry & Company, Boston, Massachusetts, for about three million dollars. Lone Star recently acquired the Municipal Gas Company from the Boston Interests.

The trunk line system of the Lone Star Gas Company is being extended from Waco to Marlin with 24 miles of eight-inch pipe, while pipe is due to begin arriving June 15 for the construction of 41 miles of 16-inch line from Waco to Temple, and about 65 miles of 14-inch pipe from Temple to Austin. These extensions are to be rushed to completion in order to provide gas for domestic consumers at the beginning of the winter season.

The completion of Lone Star's 185 miles of 18-inch gas line extending from the Shamrock gas field in the eastern part of the Texas Panhandle to Petrolia junction on the Oklahoma-Dallas unit will be made late this month, as only about 12 miles of pipe on the north end of the line remains to be welded. This line will be largely supplied with natural gas produced and controlled by the Lone Star Gas Company in Wheeler County, and will handle about 30,000,000 cubic feet daily. Well pressure is to be used in boosting the gas through this unit, while a "pull" will be made on the line with the Petrolia station during peak loads. Booster stations in the field and along the route of the line will be contructed when the maximum capacity of the line is needed, while in the meantime the Panhandle unit is to serve as a reserve gas supply for the company.

CULLED FROM THE NEWS

By Kent Ridley

THE city fathers of Oxford, Kansas, seem to have worked out in a night session of the council what of the legal talent of this country and the law makers of several states have missed—unit operation of oil leases by governmental control. Police power of municipal authorities, it would appear, permits them to regulate what goes on within the limits of the town, including the drilling of oil wells and the operation of producers. The council perhaps does not have authority to say to lot owners that they shall pool their interests for drilling a well, but they can say that otherwise no well will be drilled or that those who do not enter the agreement will be left out of it by the simple provision of limiting one well to a block. Probably if this arrangement will withstand court action, Mr. Doherty's scheme of unit operation of oil fields can be brought about by legislative enactment which limits the number of wells permitted in the area and providing that no well will be drilled in the unit until all land owners have agreed upon a division of the proceeds.

* * *

At least the business maps all still show fair to good around all localities having oil fields.

* * *

The Texas governor let a geologist out of the penitentiary on a furlough, because his company said that otherwise they could not complete a well. Which is an interesting item in two particulars—the first time a geologist was classified in the penitentiary as such and the first public notice that a convict is indispensable to the oil business.

* * *

Governmental departments, it appears, cannot be removed from direct political control, as witness the resignation of Judge Bell as the chief supervisor of the oil and gas division of the Railroad Commission of Texas. It will be remembered that Judge Bell recently called a conference of Texas operators at Austin for the purpose of devising a conservation law that would serve the best interests of all parties concerned. One of the essential provisions to this end was to provide that employes of the department who represented the state in contact in the field should be reliable men of experience in the handling of oil and gas production problems. It was over this point in arguing before the legislative committee considering the bill that the difference leading to Judge Bell's resignation arose. His superiors in the department have elective positions and are jealous of the political power to be influenced by control of a deputy supervisor's appointment. News of Judge Bell's resignation will be received with regret by all Texas operators, as it has been largely due to his reasonable consideration that rules of his department have been complied with, although there has often been question of the department's legal power to enforce.

The way oil stocks are holding up, it appears that the boys might as well cover on their shorts and quit yelping about how bad business is. "Stocks" in this instance does not refer to oil in storage.

* * *

OUR good friend Arthur Knapp, with his penchant for parables, Queen Elizabeth's yew trees and other fairy stories, now has the oil business on the hog—or at least it appears so by inference, in the following observation on the current situation:

"Once upon a time, there were some farmers who had a nice market for shoats. (Definition: shoat—little pig.) They could sell all of the shoats which they could raise and at a good profit, too. However, these farmers were not satisfied to stay home and mind their own shoat business. No! They had to get out and visit all the neighbors. They had to find out how many hogs the other fellow was raising, how much they got for them, how much it cost to feed them, and so on, infinitum. In fact they spent more time in the other fellow's hog pen than they did in their own.

"What happened? First thing you know, there was a contest on to see who could raise the most and biggest hogs.

"Now, the fellow who was buying shoats had no particular use for big hogs, so there the farmers were, with a lot of nice fat hogs on their hands which they could not sell.

"Substitute oil man for farmer and you have the present situation and a number of similar and past situations, right in a nut shell.

"The trouble is not too much competition, but too much wondering how to beat the other fellow. If each oil company would produce or buy just enough crude to make such refined products as it was SURE it could sell, then the oil situation would be quite different.

"Of course reserves are essential, but in the form of hog food and not hogs.

"This suggestion may appear obvious, but HAS IT EVER BEEN TRIED?"

DO YOU REMEMBER?

1. When and where was the first oil discovered in Texas?
2. Who gets credit for drilling the first producing well at Spindle Top?
3. What field in Texas holds the record of having the highest peak production and when was this record made?
4. From what geological formation does most of the coastal oil come?
5. What is a "burned core?"

(*Answers on "Squeaks" page, this issue.*)

CAMP AND WELL AT TONALA, VERA CRUZ, MEXICO

Life of the Wildcat Crew in Southernmost Mexico

As revealed in a letter to William V. Gross, Los Angeles representative of The OIL WEEKLY

By JAMES L. BATES

Dear Bill:

I sincerely hope this won't be the cause of your sudden death, or anything of the kind, but looking over an OIL WEEKLY I chanced to notice your name and hoped that I could hear from you.

While no important production has been obtained in the Isthmus of Tehuantepec, results after five years of constant drilling have been sufficiently encouraging to justify an increased activity in wildcat work. The quest for oil probably has never brought men to a spot more isolated or richer in romance than the Isthmus.

At prsent there is only one company operating—the Compania Mexicana de Petroleo, "El Aguila," whose general office is located in Puerto, Mexico, the southern-most point on the Gulf of Mexico.

Communication between Puerto, Mexico, and each of the seven wildcats is dependent solely upon wireless. The wireless sets are of the portable type which proved their efficiency with the Italian army during the war. These locations are invariably spotted in the heart of the densest sort of tropical jungle, which abounds with wild animals, rare birds and deadly reptiles. As in the good old Gulf Coast of Texas, wildcatters here seem to work on the hypothesis that a locality must first be good for no other economic purpose before it can be suitable for an oil field. Living in one of El Aguila's camps is duplicated in the other six, the only difference being that which is noted when looking at the same picture in a different frame.

Isolation of Tonola

I am here employed by the Aguila Company and have been here since July 21, 1926, and expect to stay for quite a while, so why not drop the old boy a line or two? I am not employed in the capacity of a field superintendent or anything of the kind, but am only an *humble* derrick man, but I expect a raise in the next 10 days to tool dresser and that will be a bit better. (He has been made a tool dresser.)

The most picturesque of all Tehuantepec's wildcatting scenes is Tonola, where this is written. From the bunkhouse to Puerto, Mexico, is a distance of about 65 kilometers, across the Bay of Campeche. To reach us the boats, after crossing the bay, proceed up the Tonola River for 12 kilometers to the small docks. These docks form the terminal for the "kalamazoo" track which runs inland eight kilometers through a small strip of right-of-way cut through the jungle to camp. The camp is visited every 10 days by a launch which brings material and mail,—except when delayed by squalls or "nortes" on the bay, which occur frequently during the rainy season from June to Noyember.

The "kalamazoos" are always a curiosity to newcomers. They are small but powerful locomotives propelled by gasoline engines. The rails are only two and three quarter feet apart and are depended upon exclusively for transportation of all material and passengers.

Tehauntepec Working Conditions

The drilling department personnel is composed entirely of Americans, 75 per cent of whom have come from various Gulf Coast fields of Texas.

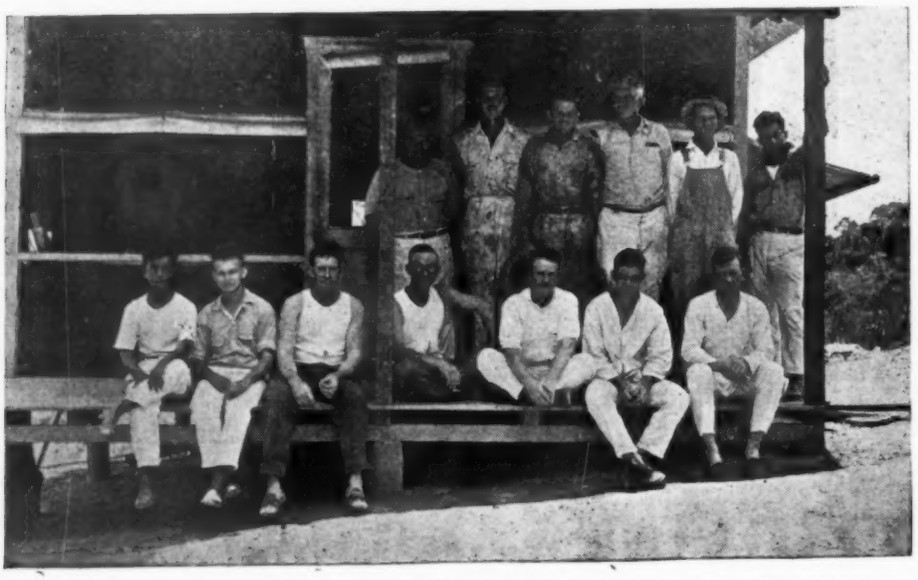
Working conditions here are good and we are given the best of consideration in every way. The food is good, the bunks are comfortable and the place suits me fine in every way, except one gets quite lonesome at times. But we are not under any prohibition laws, and even though I don't care for the dram myself, I am glad to see anybody who does like it have it.

I am on a wildcat called Tonola No. 1, with as fine a bunch as could be found anywhere. We are blessed with two radios, several pets, including chongos, parrots, coons and dogs. We are only five kilometers from the Gulf. When we are waiting on orders or equipment we generally go for a little hike up the river, hunt, fish or amuse ourselves the best way we can.

For those who are fond of hunting, the Isthmus is a veritable paradise. It is tropical in every aspect and one is impressed with the amazing productivity and wonderful vitality of the earth, which seems to be never capable of holding its energy in check. The winds are constantly performing nature marriages. Seed pollen and bits of dust are dislodged, carried to tree tops where they become fertilized, and thus is born a new, bizarre, and hitherto unknown form of plant life.

Opportunity for a "kalamazoo" joy ride is never missed. Seated in these dinky little cars, the gaze roving through the trees encounters veritable hanging gardens of various colored orchids. The vigorous undergrowth smothers many of the more delicate plants, and as if to show its determination to preserve the species, nature has provided a sort of second story where those unable to survive the struggle for existence on the lower or ground floor may grow and perpetuate themselves unmolested.

Prominent among the trees which thrive in the Isthmus is the Zapote or



LEFT TO RIGHT STANDING: SAM, THE CHINESE COOK, R. E. WILLIAMSON, HELPER; JAMES L. BATES, TOOLDRESSER; H. BROSIUS, DRILLER; A. R. DIXON, DERRICKMAN; C. RIFE, HELPER. SEATED: JOSE, THE CHINESE WAITER; RICORDO VIDANO, WIRELESS OPERATOR; R. MINTON, HELPER; BOOB SELLERS, DRILLER; RED COWELL, TOOLDRESSER; RUBEN WILSON, HELPER; FRANK DUNGEN, DERRICKMAN.

Papaya, a specie of what is known in the States as the pawpaw. It grows wild, is prolific and attains a height of from 20 to 25 feet. The leaves are dark green, and as if to attract attention, they grow in a cluster at the top of an otherwise leafless trunk. The tree begins to bear fruit when a year old and produces from 50 to 100 melons at a time. The development of this tree can be taken as an example of the industry shown by nature in the tropics. So rapid is its development that buds and flowers, green and ripe fruit may be seen on a single tree at the same time. It is rich in pepsin content, a big portion of which is dried and shipped to the States where it is used as a cure for dyspepsia. Their sex is well defined, and where they are cultivated only one male tree is permitted to grow in a grove of 50 or more females. The fruit and leaves possess the singular ability to render tough meat tender, and we employ them for this purpose. A tough chicken hung in a Papaya tree over night will be as tender next morning as a Maryland fryer. As proof that the tiger, or at least the Mixican tiger, is a vegetarian by preference, his trap is usually baited by the natives with a luscious papaya.

Joys of Tropical Fever

A never-to-be-forgotten experience of every roughneck and field worker is his journey to the company hospital at Minatitlan, which he is certain to make at least once if for nothing more than malaria, or paludismo, of which there is much in the Isthmus, but which, fortunately, responds readily to quinine. The "kalamazoo" line plunges at once into the jungle. The immediate transition from the sandy wind-swept shore of Puerto Mexico to the cool, fragrant woods is complete and entirely pleasing. Tropical vegetation grows with such vigor as to offer a very serious problem in maintenance to the company along its right-of-way. The creepers and smaller plants nearest the rails are killed easily by chemicals employed for the purpose, but the larger plants offer more resistance. It is necessary to assign to every 10 miles of track a peon gang which keeps them cut with the native machetes.

Most of the jungle trees bear some kind of beautiful flower, and the orchid, so priceless in the States, grows in such profusion as to present unusually beautiful masses of color. As if to aid in the enchantment, great branches extending from giant patriarchs of the jungle world reach over the right-of-way from both sides, forming a tunnel of foliage through which the little train passes. For most of the journey these are hung with brilliant flowering vines from which can be seen swinging huge ant nests and birds' nests.

It is only natural that a big portion of the foreign residents and oil workers here should want to preserve the memories of such beautiful settings for the time when they return home. So one is as apt to go hunting with a camera as with a rifle. But to one who has never visited the Isthmus, a picture can convey none of the charm to be found, and the right combination of photographer and camera has yet to be found which can capture the awe-inspiring atmosphere of the jungle. It is felt and sensed rather than seen.

Considering the difficulties with which our company is confronted in maintaining civilized living conditions in its various camps, it does remarkably well. No expense is spared in an effort to make the inhabitants as comfortable as possible. The most secluded and out of the way wildcat camp has its dynamo, ice machine and distilled drinking water.

Wildcatters' Diversion

A part of every camp is a varied assortment of pets from chongos (monkeys), to parrots. In my camp there are two parrots, two monkeys, two perros de agua (water dogs), one baby tiger, one armadillo, and even a tamed porcupine, at times all playing together as one happy family. Most of these are caught when very young, on hunting expeditions by my buddies who never miss an opportunity on off-days. So plentiful is game that one can decide on the kind of pet desired before starting and be reasonably sure of success. The only unfortunate circumstance is that the mother animal usually has to be killed out of self-defense.

Near our camp there dwell the Mexican deer, tapir, juguar, tiger cat, nine-banded armadillo, ring-tailed cat and many lesser mammals. The most common specie of reptile is the iguana, which has come down through the centuries unchanged by the process of evolution. Its flesh is as tender and white as that of a young chicken, and its legs are esteemed by the natives as a delicacy. Even the repulsive lizards themselves are eaten and relished.

Native Women

By far the most picturesque town on the Isthmus and most popular with the American oil field workers is the city of Tehuantepec, stronghold of the original inhabitants of this district. The visitor is surprised into admiration of the superb beauty of the women who form the bulk of the population. The majority of the males are immigrants from adjoining states and are considered inferior to the women. This condition was brought about when practically all the Tehuana men were killed in the struggles and revolution following the war for independence. It is said that the proportion of females to males is five to one. Because they are for the most part pure bloods, the racial and facial characteristics of the females are more noticeable. This relative scarcity of the males makes of them individuals of more importance than if the sexes were more evenly balanced. The women, jealous and passionate by nature, are perhaps made more so by this difference in numbers. They remind one more of Orientals than Mexicans, and their customs and dress bear out this comparison. They devise and design for themselves weird and enchanting costumes that never fail to delight the eye. When first beheld by the average "Gringo," he thinks of some bewitching siren, which in truth they are. The upper part of their costume is cut very low at the neck, and has short sleeves. They are invariably made of brilliant colored cloth and trimmed with gold braid. Flowing loose at the waist, a bit of skin peeping through, and every curve of their supple figures plainly visible. The skirt is an exact duplicate of the Malay "Sarong"—several yards long, a border at the bottom made of some brilliant trimming, wrapped snugly around the hips and tucked in at the waist. The balance of their costume consists of sandals, a bright kerchief wound coquetishly about their heads, a string of gold pieces about their necks and a smile that displays a row of perfect white teeth completes a very compelling costume. Bill, it is no place for a minister's son.

Many of the women smoke and it is said that their babies are almost weaned on tobacco fumes. They nurse their young until they are three or four years old. It is no uncommon sight to see

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Rise in Russian Business Helps Oil Industry

Higher local prices have been proposed as Soviet treasury cannot supply large capital needed for expansion

Translated and abstracted by Boris Baievsky, U. S. Department of Commerce, from "The Azerbeidzhan Oil Economy," Baku.

THE Russian fiscal year 1925-26 marked a turning point in the Soviet oil trade. At the beginning of the preceding year the supply was decidedly larger than the market demand, but toward the end of that year and in 1925-26 conditions changed sharply, the demand rising while the supply remained limited. The increase of the demand in 1924-25 was attributed to a rapid development of Russian industry, transportation increasing 26 per cent and industrial production 60 per cent during this year. This development naturally called for larger quantities of fuel oil and other oil products. At the same time exportation of petroleum products increased from 44,100,000 poods in 1924-25 to 91,400,000 in the following year. (1 pood equals 36.11 pounds.) Domestic petroleum sales rose 32 per cent, and exportation 85 per cent, while production increased only 17.5 per cent, so that a large part of the demand had to be supplied from accumulated stocks, which showed a marked depletion at the end of the year.

In 1925-1926 the development of Russian industries continued at the same pace and exportation remained normal, sales increasing to 325,200,000 poods, an amount which could have been still further increased if it were not for the shortage of stocks. It is evident that the Russian oil industry must provide for the accumulation of at least a small stock of oil products, in addition to satisfying the growing demand of the local and foreign markets. It appears, then, that in 1926-27 crude production should reach 590,000,000 poods, and that of distilled oil products 425,000,000, compared with 520,000,000 and 355,000,000 poods, respectively in 1925-26. This means an increase of about 15 per cent in crude and 19 per cent in products, an achievement which is seriously handicapped by several circumstances. The drilling necessary to keep production at a certain level proved to be considerably more than calculated; the building of plants of the Azneft Oil Trust has been delayed, which may result in a smaller output of kerosene, and reduced appropriations for capital construction are apt to have an unfavorable effect.

The territory of the U. S. S. R. may be divided into two parts: (1) Caucasus, Turkestan, Southeast European and the Ukraine, which are near the oil fields and can be supplied the year around from the products of current production and refining, and (2) the rest of Russian, which is supplied from stocks in storage tanks along the Volga River; the amount of oil stored in these tanks up to the end of the navigation season determines the amount of oil available for consumption during the seven or eight months until the opening of the new navigation period.

Fuel Oil

Sales of fuel oil during the first three months of 1926-27 came to 63,550,000 poods; advance estimates covering the whole of the current fiscal year range from 250,000,000 to 260,000,000 poods, 100,000,000 for the first region and the remainder for the second. This is a reduction of about 12 per cent from the sales of the preceding year, while the total consumption of fuel of all kinds is expected to increase by 18 to 20 per cent.

During 1925-26 sales of fuel oil comprised 64 per cent of the gross income of the Oil Syndicate and 82 per cent of its sales volume. The limited stocks did not permit the satisfaction of the growing demand during its closing months, and measures were taken to reduce this demand, which, nevertheless, reached 280,000,000 poods during the year, or 20 per cent more than in 1924-25.

prior to the war, exports of fuel oil were insignificant (3,900,000 poods in 1913) and were of the character of special sales on orders. The development of this trade in recent years is shown in the following figures:

Russian Exports of Fuel Oils

(Thousands of poods)

Year	Mazout	Diesel oil	Crude oil	Total
1921-22	13	....	....	13
1922-23	332	....	1,963	2,295
1923-24	2,073	167	4,414	6,654
1924-25	23,655	2,354	3,778	29,787
1925-26	21,800	7,400	6,900	36,100

The shortage of fuel oils for the home markets brings up the question of whether it is advisable to export this product. It appears, however, that if petroleum exportation generally is not to be given up, exports of certain amounts of fuel oil are unavoidable, as oil products are sold in definite assortments. As a general rule, fuel oil is the least profitable as an export to European countries, but at the same time it is used, from the State's viewpoint, for the most important needs, such as the navy and merchant marine, and railroads. Therefore, in many countries the sellers of mazout are given special privileges which facilitate sales of other oil products. In addition, a ton of fuel oil is saleable at Batoum at about 50 shillings, thus dispensing with transportation costs to Leningrad, where foreign coal producing an equivalent heating effect may be purchased for 31.5 shillings. This gives a considerable saving on direct cost; in addition, the omission of transportation from Batoum to Leningrad is an important point in saving expense and relieving the overtaxed transport system. On these accounts it has been estimated that exports for 1926-27 will be at least 28,700,000 poods, of which 13,500,000 poods are already sold. Detailed estimate has made this exportation 30,700,000 poods, consisting of 16,000,000 poods of mazout, 6,000,000 of Diesel oil and 8,700,000 of crude. It is claimed that a 1926-27 production of 305,700,000 poods of crude will be necessary in order to supply the amount above estimated for domestic consumption and exportation.

Kerosene

Kerosene is one of the few oil products which has a general consumption throughout Russia. Its sales have grown from 15,500,000 poods in 1921-22 to 35,030,000 in 1924-25 and 51,000,000 in 1925-26; for the first three months of 1926-27 they have come to 20,200,000 poods. The pre-war consumption of kerosene in the Russian Empire was 65,000,000 poods and that in the present territory of the U. S. S. R., 51,000,000 poods; that is, sales have now reached their pre-war mark. A considerable expansion is still to be expected, however, since pre-war Russia was very poorly lighted, especially in the villages, and cases of using wood splinters for lighting were not rare.

The per capita consumption of kerosene in Russia before the war was lower than in many American and even Asiatic countries, being 16 pounds (Russian pound is about nine-tenths of American pound); the urban consumption was 60.5 pounds per capita and that of the rural population only nine pounds. In recent years it has been calculated at 6.8 pounds in 1923-24, 9.3 in 1924-25 and 12.7 in 1925-26, the urban consumption growing from 25 to

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Heavy Movement of Panhandle Crude Lowers Storage

Production trend is shifted to northwest with Moore County wildcat showing for a good producer

By H. H. KING
Staff Representative

AMARILLO.—The production trend in the Texas Panhandle area shifted to the northwest during the past week into north-central Moore County, where A. D. Morton et al of Bartlesville, Okla., brought in a wildcat oil producer on the W. H. Reeder land estimated at several hundred barrels daily from lime pay at 3370-79 feet, with a surface elevation of 3512 feet. This well is 15 miles northwest of M. Cadman et al's Sneed 1, which has been the only oil producing well in Moore County, and is about 25 miles northwest of the nearest production of any consequence in Hutchinson County.

The performance of the Morton wildcat has stimulated lease and royalty trading in upper Moore County, and also across the line in Hartley and Dallas and Sherman Counties.

The Moore County wildcat oil producer is located at the center of the north half of section 191, T. & N. O. Ry. survey, block 3-T, and nine miles northeast of Dumas. This well is somewhat high on structure, as compared to wells in Hutchinson County, since it is now 133 feet above sea level depth. It is also the deepest oil producing well in the Panhandle district, although surface elevation differences account for this fact. The well began filling up with 33.7 degree gravity oil early last week after drilling several feet in the lime pay encountered at 3370 feet, and when drilled nine feet in the oil formation the gas increased to about 1,000,000 cubic feet, with small heads of oil following the swab.

The well is credited with having flowed about 50 barrels of oil after standing overnight, and a partial test with the swab indicates that it will make 200 barrels or more daily. The top of the big lime was encountered at 2474 feet, and a flow of sulphur gas rated at 60 million cubic feet daily at 2805-55 feet, was cased off with six and five-eighths-inch pipe set at 3184 feet.

This wildcat was slated to be capped as a gasser, and supply fuel for Dalhart through a line proposed by Morton and associates, while the discovery of oil will probably require the drilling of an offset test to obtain gas to fulfill the franchise contract with Dalhart.

The movement of crude via pipe lines from the Panhandle district to the Gulf Coast during May materially checked the accumulation of crude stocks in the district, and more than 100 days of storage is available at the rate it was used during the past month. Pipe line companies and producers in the Panhandle added 1,442,570 barrels to stocks during May, making a total of 18,338,790 barrels on hand in the district on June 1. Stocks accumulated at the rate of 46,535 barrels daily during May, as compared to an average accumulation of 74,061 barrels daily in April. The available room in the various Panhandle tank farms was estimated at 4,861,210 barrels at the close of May.

Humble Shipments

Humble Pipe Line Company accounted for the largest amount of crude movement from the Panhandle through its 10-inch line leading south via Comyn station, Comanche County, to the Coast. This line began operating April 29, and during May handled 842,800 barrels, or an average of 27,187 barrels daily. Humble withdrew 185,835 barrels from Panhandle storage during May, leaving a total of 767,190 barrels on hand at the close of the month, besides running its own production and outside purchases during the month. The Gulf-Magnolia line, which is the same size as Humble's carrier, did not start running regularly until May 7, and handled 543,625 barrels during the month, or an average of 17,536 barrels daily. Most of this oil was loaded out by Magnolia, since Gulf has a surplus of storage, and is not ready to receive Panhandle oil in large quantities at the south end of the partnership line in Eastland County.

Prairie Pipe Line Company practically finished its eight-inch line leading from its Kings Mill tank farm to Ringling, Okla., with oil during May, and also filled several station tanks en route. Prairie is credited with having relieved its Panhandle storage of about 110,000 barrels in this manner, but had not started regular pumping on its line at the close of May. Prairie has accumulated 2,007,050 barrels of crude stocks in the Panhandle, and has delayed the operation of the line pending the completion of some changes on the Texas end of its Mid-Continent system to permit throughput to Mexia for storage.

Crude stocks in the Texas Panhandle district at the close of May, 1927, as listed below by companies:

Company—	Bbls.
Magnolia Pipe Line Co.	3,941,570
Gulf Pipe Line Co.	3,254,095
Phillips Petroleum Co.	3,117,400
Marland Pipe Line Co.	2,146,790
Prairie Pipe Line Co.	2,007,050
Skelly Oil Co.	1,044,375
Humble Pipe Line Co.	767,190
Plains Pipe Line Co.	635,525
Dixon Creek Oil Co.	240,490
Bell Oil & Gas Co.	240,450
Empire Gas & Fuel Co.	235,850
Cockrell-McIlroy Oil Co.	145,580
Roxana Petroleum Corp.	91,495
Mid-West Exploration Co.	83,055
Japhet Production Co.	78,720
Derby Oil Co.	70,785
Devonian Oil Co.	68,785
Atlantic Oil Prod. Co.	57,525
Coble-Whittenburg Oil Co.	49,975
Champlin Refining Co.	34,100
The Texas Co.	23,765
Toronto Pipe Line Co.	4,220
Totals	18,338,790
Totals close April	16,896,220

PANHANDLE OPERATIONS

	Completions	Active Tests	Shut Down	Rigs & Derricks	Locations	Totals
Brisco Co.	..	1	..	..	..	1
Carson Co.	4	22	3	..	..	29
Castro Co.	..	1	1	1	..	3
Childress Co.	..	1	2	..	..	3
Cochran Co.	..	..	1	..	..	1
Collingsworth Co.	..	..	1	..	1	2
Dallam Co.	..	1	2	..	..	3
Deaf Smith Co.	..	..	2	..	..	2
Donley Co.	..	..	1	..	..	1
Gray Co.	2	24	9	14	8	57
Hartley Co.	..	4	..	..	..	4
Hemphill Co.	..	1	..	..	..	1
Hutchinson Co.	25	84	38	14	..	161
Lipscomb Co.	..	1	2	..	..	3
Lubbock Co.	..	..	1	..	..	1
Moore Co.	..	6	1	1	..	8
Motley Co.	..	3	..	1	..	4
Ochiltree Co.	..	1	4	..	..	5
Oldham Co.	..	..	1	..	..	1
Parmer Co.	1	..	..	..	..	1
Potter Co.	..	..	..	..	1	1
Roberts Co.	..	..	2	..	..	2
Sherman Co.	..	1	1	1	1	4
Wheeler Co.	..	10	9	3	..	22
Totals	32	161	81	35	11	320

Oil and Gas Division in West Texas

Breckenridge, Texas.—An oil and gas division of the West Texas Chamber of Commerce was formed here Monday during a joint meeting of oil producers and officials of the chamber to co-operate with the oil industry in the development of West Texas areas. The newly created bureau will establish an office at a point to be decided upon at a later date and is also to have a full time secretary. W. W. Hamilton, prominent Wichita Falls operator; R. W. Haynie, president, and Homer D. Wade, manager of the West Texas Chamber of Commerce, and Clarence E. Gilmore of the Railroad Commission, made talks.

Present Outlook Indicates Seminole Has Passed Its Peak

Current flush near high mark but not sufficient to offset natural decline with "head" off at Bowlegs

By ROYE MUNSELL
Staff Representative

TULSA.—From all indications it seems probable that the Seminole district reached its peak production when on June 4 it made a total of 374,482 barrels from all four fields. Since then production has failed to hold, despite the completion of a near record number of new wells, and it has slumped until it stands at the present writing as 361,741 barrels from 517 wells.

In any event, peaks will be harder to reach since the "head" is pretty well off of the Bowlegs field, Seminole's newest producing area. Very few wells are being completed there now with large initial flows. Since the natural gas pressure seems to be off, the output of the region in the future will be pretty well governed by the air-gas lift.

As it has already been mentioned, the district's decline since its peak, on June 4, is in spite of a large number of new wells added. The natural decline of production is becoming an increasing factor in the district's output.

Dependent on Shut-Down

All of this speculation as to peaks takes into account also the fact that the district is under a shutdown and curtailment agreement. Were it not for the curtailment and shutdown agreement which is now in effect, it is more than likely, on the other hand, that the ultimate output would be considerably more than the present peak of 374,741 barrels.

As it is, production in the "inside" of the four fields, Seminole City, Searight, Earlsboro and Bowlegs, is curtailed after a fashion. And, what is probably more important, "outside" wildcat tests are being shut down before they reach the big pay.

There are about 100 of these wildcat tests, and, as potential pool openers, it is hard to over estimate the importance of a goodly number of them. One or more additional fields comparable to Bowlegs or Earlsboro will probably be found eventually in the 1080 square miles of territory which is taken to comprise the Seminole district.

If the present curtailment and shutdown agreement continues in effect, these fields will not be opened. In this connection, it ought to be said that there are no indications that the agreement will not be upheld as long as it seems to be necessary.

Features Lacking

There were no outstanding developments at Seminole during the past week. Of particular interest, however, was the Roxana Petroleum Corporation's new well in the Searight field. Their Strothers 1, in the northwest of the southwest of the northeast of 3-9-6, which is flowing at the rate of 175 barrels an hour from the Wilcox sand at 4361-72 feet, is one of the largest producers in that particular area. What is probably more interesting, it is close to a dry hole that was considered to define the field.

In the township east of the new well by Roxana, the Carter Oil Company had a dry hole. By virtue of the fact, however, that the Carter test found the Wilcox pay structurally high, it was not taken very seriously as an indication of the possible extent of the field's producing area in that direction.

The Bowlegs field was extended to the southwest by the Independent Oil & Gas and Marland Companies' Coker 1, in the northeast of the southeast of the northeast of 21-8-6. The well found the top of the Wilcox at 4253 feet, and at five feet in is swabbing and flowing 30 barrels an hour.

The north side of the Bowlegs field is looking better since the Sinclair Oil & Gas Company's Ellen 1, in section 11, is making better than 2500 barrels a day on the air lift.

The Sinclair Oil & Gas Company's Forman 1, in 18-9-5, west of Earlsboro, is again a matter of interest. This well was first drilled into the first Wilcox where it found water. Later it was plugged back to the Hunton lime and made a Hunton producer. Production from the Hunton was only small, however, and soon fell off to virtually nothing. When production was found in the second Wilcox, it was decided to drill the well on down and made a second Wilcox test of it.

The top of the second pay was picked up at 4395 feet and the well made several small flows, apparently from the second Wilcox. Since then after more careful testing, however, it is pretty certain that the oil is from the Hunton higher up and the second Wilcox is dry at this location also.

SEMINOLE DISTRICT PRODUCTION

24 hours ending 7 a. m. June 11.

SEMINOLE CITY FIELD

Company, Lease, Location—	No. Wells	Production
Amerada Pet. Corp.—		
Fixico, 23-9-6	4	1,685
Killingsworth, 23-9-6	4	525
Rentie, 23-9-6	4	1,520
Total	12	3,730
Atlantic Oil Prod. Co.—		
N. Cudjo, 35-9-6	4	410
J. Cudjo, 35-9-6	1	off
Total	5	410
Barnsdall Corp.—		
Carter, 24-9-6	9	4,884
Jones, 34-9-6	4	2,180
Total	13	7,064
Carter Oil Co.—		
B. Carter, 24-9-6	2	225
F. Carter, 23-9-6	3	600
J. Cudjo, 24-9-6	4	90
R. Cudjo, 35-9-6	3	1,875
Gilliland, 27-9-6	1	660
Grisso, 23-9-6	7	1,385
G. Killing, 14-9-6	3	1,530
M. Killing, 23-9-6	9	18,627
F. Knapp, 13-9-6	3	1,395
Lukes, 27-9-6	6	4,080
Simpson, 35-9-6	2	485
Strothers, 34-9-6	2	5,660
Vierson, 23-9-6	4	1,230
Total	50	38,322
Gypsy Oil Co.—		
Butler, 35-9-6	3	1,372
Carter, 24-9-6	8	2,175
T. Cudjo, 34-9-6	3	53
Fixico, 26-9-6	8	230
Harjo, 25-9-6	2	930
Wolfe, 26-9-6	6	1,245
Total	30	6,005
Independent Oil & Gas Co.—		
P.Fixico, 23-9-6	3	390
Harjo, 25-9-6	2	15
Total	5	405
Independent & R. F. Garland—		
T. Fixico, 26-9-6	8	1,332
Independent & Inter Ocean—		
Jones, 26-9-6	4	646
I. T. Ill. Oil Co.—		
Bowlegs, 26-9-6	10	3,938
Goodin, 23-9-6	4	810
Harjo, 23-9-6	4	718
James, 24-9-6	4	1,080
Marcy, 13-9-6	1	off
Reed, 24-9-6	3	79
Total	26	6,625

SEMINOLE DISTRICT PRODUCTION—Continued

Company, Lease, Location—	No. Wells	Production
Kingwood Oil & Gas Co.—		
Harjo, 22-9-6	5	2,443
Magnolia Pet. Co.—		
Franks, 25-9-6	3	1,440
McCullough—		
Butler, 35-9-6	2	845
Mid-Continent Pet. Corp.—		
Rentie, 14-9-6	9	2,005
Tayoche, 24-9-6	7	540
Total	16	2,545
Mid-Kansas Oil & Gas Co.—		
Presley, 3-8-6	1	50
Wilkins, 25-9-6	1	825
Total	2	875
Phillips Pet. Co.—		
Strothers, 27-9-6	3	917
Prairie Oil & Gas Co.—		
Gross, 25-9-6	5	120
Mason, 36-9-6	1	910
Spencer, 13-9-6	1	25
Strothers, 27-9-6	7	2,190
Total	14	3,245
Pure Oil—		
Strothers, 26-9-6	16	2,866
Strothers "B", 36-9-6	3	4,926
Total	19	7,792
Roxana Pet. Corp.—		
Harber, 22-9-6	2	616
Lasley, 22-9-6	2	246
Total	4	862
Sinclair Oil & Gas Co.—		
Carter, 23-9-6	2	40
Cudjo "A", 35-9-6	6	1,530
Cudjo "B", 35-9-6	3	795
Grisso, 22-9-6	1	695
Fixico, 23-9-6	4	840
Total	16	3,900
T. B. Slick—		
Born, 35-9-6	1	off
Cudjo, 35-9-6	3	2,037
Franks, 35-9-6	7	2,533
Giblet, 35-9-6	1	2,030
Total	12	6,602
Superior Oil Corp.—		
Cudjo, 35-9-6	4	2,585
Noble, 15-9-6	1	6
Total	5	2,591
The Texas Co.—		
Mayhue, 14-9-6	1	30
The Tidal-Osage Oil Co.—		
Carter, 24-9-6	6	2,549
Fixico, 26-9-6	7	1,860
Harjo, 23-9-6	7	200
Mahardy, 24-9-6	5	1,180
Noble, 15-9-6	1	off
Tayoche, 25-9-6	2	2,410
Total	28	8,190
Turman Oil Co.—		
Cudjo, 35-9-6	4	1,188
Grisso, 35-9-6	1	584
Jones, 34-9-6	4	4,868
Total	9	6,640
Seminole City Field Total	297	116,076

SEARIGHT FIELD

Company, Lease, Location—	No. Wells	Production
Carter Oil Co.—		
Davis, 4-9-6	5	9,370
Frazier, 3-9-6	4	7,930
Kiker, 2-9-6	1	50
Scott, 26-10-6	1	40
Stewart, 34-10-6	1	off
Total	12	17,390
Mid-Continent Pet Corp.—		
Davis, 33-10-6	1	35
Grayson, 34-10-6	5	6,210
Total	6	6,245
Prairie Oil & Gas Co.—		
Cannon, 33-10-6	1	off
Carter, 10-9-6	1	15
Houck, 33-10-6	1	10
Kinkade, 33-10-6	7	5,130
Wemer, 22-10-6	1	off
Total	11	5,155
Pure Oil Co.—		
Aldridge, 3-9-6	2	998
Roxana Pet. Corp.—		
Strothers, 3-9-6	1	224
F. J. Searight—		
Youngblood, 33-10-6	3	off
Sinclair Oil & Gas Co.—		
Polly 3-9-6	2	1,045
Twin State Oil Co.—		
Jeming, 4-9-6	1	1,075
H. F. Wilcox—		
Cluck, 4-9-6	2	3,560
Searight Field Total	41	36,317

BOWLEGS FIELD

Company, Lease, Location—	No. Wells	Production
Amerada Pet. Corp.—		
Rascoe, 15-8-6	8	10,150
Atlantic Oil Prod. Co.—		
Baker, 10-8-6	2	4,324
Fleet, 23-8-6	2	4,576
Jones, 16-8-6	2	875
Total	6	9,775
Barnsdall Corp.—		
McNac, 28-8-6	1	25
Murrow, 11-8-6	1	631
Total	2	656
Carter Oil Co.—		
Bowlegs, 15-8-6	2	5,250
Harjoche, 14-8-6	4	4,935
Walker, 15-8-6	1	3,145
Wise, 23-8-6	4	8,960
Total	11	22,290
Empire Co.—		
Lacey, 14-8-6	4	6,576
Gypsy Oil Co.—		
Brown, 33-8-6	1	106
Seminole, 5-8-6	1	off
Walker, 15-8-6	6	3,802
Total	8	3,908
Independent & Marland—		
Boker, 21-8-6	1	430
I. T. Ill. Oil Co.—		
Davis, 13-8-6	2	3,475
Gofrth, 15-8-6	7	10,899
Livingstone, 15-8-6	7	13,778
Walker, 15-8-6	7	7,598
Wilmouth, 15-8-6	3	3,545
Youngblood, 24-8-6	3	3,621
Total	29	42,916
McCullough—		
Bowlegs, 22-8-6	1	300
Mid-Continent Pet. Corp.—		
Baker, 10-8-6	2	2,181
Hutka, 24-8-6	1	185
Total	3	2,366
Minnehoma Oil & Gas Co.—		
Bowlegs, 15-8-6	2	2,485
Prairie Oil & Gas Co.—		
Gahagan, 23-8-6	1	2,875
Harber, 10-8-6	3	4,500
Whitney, 23-8-6	2	685
Total	6	8,060
Pure Oil Co.—		
Reed, 14-8-6	10	11,471
Roxana Pet. Corp.—		
Taylor, 16-8-6	4	947
Sinclair Oil & Gas Co.—		
Adam, 22-8-6	1	92
Bowlegs, 22-8-6	1	360
Ellen, 11-8-6	1	2,620
Harjo, 14-8-6	3	4,345
C. Jones, 9-8-6	1	2,140
Taylor, 10-8-6	1	2,320
Walker, 22-8-6	2	2,750
Total	10	14,627
Tidal-Osage Oil Co.—		
Harjoche, 10-8-6	1	1,615
Bowlegs Field Total	108	144,612

EARLSBORO FIELD

Company, Lease, Location—	No. Wells	Production
Amerada Pet. Corp.—		
Anderson, 15-9-5	3	6,255
Cowden, 4-9-5	1	5,310
Total	4	11,565
Barnsdall Corp.—		
Bruner, 2-9-5	1	35
Cudjo, 14-9-5	1	30
J. Davis, 11-9-5	2	320
M. Davis, 11-9-5	1	232
Harjo, 10-9-5	1	97
Pack, 10-9-5	1	330
Peter, 10-9-5	1	499
Sango, 1-9-5	1	170
Sebolka, 15-9-5	1	4,608
D. Smith, 15-9-5	2	898
Sullivan, 10-9-5	1	21
Total	13	7,240
J. E. Crosbie—		
Bryant, 1-9-5	1	3,215
Gypsy Oil Co.—		
Boro, 16-9-5	1	off
B. Carter, 11-9-5	2	347
Earl, 16-9-5	2	off
McFarland, 9-9-5	2	945
Peters, 10-9-5	3	3,107
D. Smith, 15-9-5	1	off
State, 16-9-5	4	6,125
Strain, 17-9-5	1	20
Total	16	10,444
Independent Oil & Gas Co.—		
Bruner, 10-9-5	4	184
Independent & Darby Pet. Co.—		
Knapp, 6-9-5	1	2,055
Inter Ocean Oil Co.—		
Jayne, 12-9-5	1	280
Magnolia Pet. Co.—		
Bryant, 9-9-5	2	6,431
Holmsley, 11-9-5	1	6,571
Ingram, 10-9-5	1	52
Lena, 10-9-5	3	283
Seay, 12-9-5	1	35
Simpson, 10-9-5	3	431
Sparks, 11-9-5	5	8,621
Total	16	22,424
Mid-Continent Pet. Corp.—		
McKinley, 9	2	4,065
Phillips Pet. Co.—		
Gram, 9-9-5	3	1,887
Philmack & Marland—		
Dobbs, 8-9-5	2	772
Prairie Oil & Gas Co.—		
Baker, 24-9-5	1	295
Stidham, 11-9-5	1	off
Total	2	295
Sinclair Oil & Gas Co.—		
Foreman, 18-9-5	1	off
Texas Co.—		
Ingram, 10-9-5	1	off
Wilmott, 10-9-5	4	310
Total	5	310
Earlsboro Field Total	71	64,736
Summary:		
Seminole City Field	297	116,076
Searight Field	41	36,317
Bowlegs Field	108	144,612
Earlsboro Field	71	64,736
Grand total	517	361,741
Average per well		699.8

Bert Cleveland, sales manager of Regan Sales Corporation, Los Angeles, is a visitor in the Mid-Continent this week. He spent last week in Houston, going from there to Oklahoma.

Mark O. Danford, tax commissioner for the Midwest Refining Company, has been transferred from the Casper to the Denver office and will make his headquarters in Denver in the future.

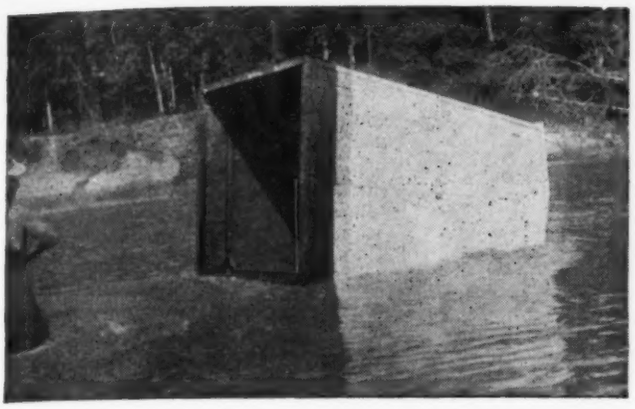


FIG. 1 SHOWING A NEW DEVELOPMENT IN TORSION BALANCE OBSERVATION HOUSES WHICH WILL FLOAT ON THE WATER AND CARRY A LOAD.

FIG. 2. THE NEWLY CONSTRUCTED HOUSE LINED WITH A SUBSTANCE CAUSING IT TO FLOAT IS BEING LOADED WITH INSTRUMENTS TO CROSS THE RIVER.

Something New in Torsion Balance Observation Houses

By JOHN F. WEINZIERL

THE most cumbersome part of the equipment of a torsion balance troop is its observation house. Thirty or more years ago, the torsion balance was regarded as the plaything of scientists, governmental geologic surveys, or possibly a few individuals who hoped by this means some day to find a method to reduce the great expense of exploration work. The size of the observation house was such as to fulfill as nearly the scientific requirements for air insulation. These designs were kept and were introduced into America at the beginning of the time when geophysical instruments were to play so great a role in the development of mineral resources.

But today the torsion balance, as well as its observation house are in the hands of a highly specialized industry and consequently the original balance and its observation house, still in use, and the formulae and methods of interpretation have been forced to undergo changes in order to meet the demands of the present day rapid methods of exploration. Whether these changes will be warranted after some years when the oil situation is such as to permit the drilling and proving of some of the present prospective areas which have been found by geophysical instruments, is still a question. The fact remains that the industry, in part if not quite as a whole, has satisfied itself that there is something to geophysical instruments and with an enthusiasm as great as was its skepticism of some years ago is out after any method which promises the greatest results, the greatest accuracy, and the least expense.

House Designs

In the endeavor to reduce the size of the observation house, many different house and instrument designs have been made, as for example: The Oertling observation house, which, with its round cylindrical form, serves the purpose of protecting the apparatus during transportation in that the instrument is firmly clamped within it and facilitates transportation in the fact that the entire housing with instrument can be rolled about on the ground if need be, and also the recent development of the Exploration G. m. b. H., Berlin in its attempt to totally eliminate the observation house in its new type torsion balance described on pages 29 to 31 of THE OIL WEEKLY of August 13, 1926.

The writer's attention was recently called to an observation house designed and patented by Heinz Kuhne and manufactured by the North American Exploration Company, Houston. This house is radically different from other houses built by companies in this area in its design, as well as in the insulation, which is made of a very light, water-tight substance used in the maritime industry. This substance has the advantage over other materials used to insulate these houses from changes in temperature in not absorbing moisture from water in rivers and marshes and from the air on damp days as is the case with other insulation material used, such as cotton, Spanish moss, beaver board, etc. The fact that this house is lined with this substance gives it buoyancy and allows it to float with very little submergence on water and marshy areas.

In figure 1, will be seen this type of house as it floated on the San Jacinto River, near Houston The man is seen pushing the house away from

FIG. 3. THE SAME HOUSE WITH ITS LOAD OF INSTRUMENTS AND MEN AFTER IT HAD BEEN FLOATED INTO THE DEEPER PORTIONS OF THE RIVER.

FIG. 4. THE ABOVE MENTIONED HOUSE TAKEN IN PIECES AND INSTRUMENTS PACKED ON FLOATING MEMBERS.

FIG. 5. A MAN AND SOME MORE EQUIPMENT WAS ADDED TO THE LOAD OF INSTRUMENTS ON ONE FLOATING MEMBER OF THE HOUSE SHOWN IN FIG. 4 AS A FINAL TEST.

him, demonstrating how it will float on the water.

In Fig. 2 will be seen the same house being loaded with instruments in order to cross the river. Again in Fig. 3 this same house is shown out in the river floating with its load of instruments. Two men are sitting on the instrument boxes while a third is standing by the side of the house in the water. From the depth he is standing in the water an idea can be formed as to the amount the house has been submerged. In their eagerness to demonstrate how well the house would float, these men took the entire thing apart and laid the side members of the house on the water. Upon these members they packed their instruments and finally one of them sat down upon the entire equipment as shown in Figs. 4 and 5.

These new developments may be looked upon with doubt by some of the more conservative geophysicists who still maintain that the original torsion balance house is the only correct design allowing for sufficient air space to as nearly as possible keep the temperature constant in the house. But work with houses of this same design which are in use by several companies and a model which was described on page 37 of THE OIL WEEKLY of December 24, 1926, has been satisfactory.

The heads of geophysical departments of different companies will do well to watch the different developments along these lines. Granting that many have gone too far or will go to the extremes along particular lines, it still remains that some new designs will fit the requirements of companies operating in certain areas. By carefully studying the transportation problem confronting the troops in the field the head of a department can not only speed up the work by better results, but will appreciably cut down the costs of transportation of instruments and observation houses.

Yates Shallow Pool Extended to East by New Completion

San Angelo, Texas.—The Yates shallow oil field in eastern Pecos County was widened one and one-quarter miles to the east early this week when Allsmaan & Bell's test in the bed of the Pecos River filled 300 feet with 30 gravity oil after drilling 32 feet of oil saturated lime at a total depth of 1002 feet. The test was drilled ahead Tuesday with gas in evidence, and a commercial producer is practically assured. This test logged the top of the salt at 450 feet with a surface elevation of 2142 feet and gives the field a width of two and one-quarter miles. Gulf, Marland and Transcontinental et al hold offsets to the river bed test.

Production in the Yates field, which has been confined to the Mid-Kansas-Transcontinental discovery block, was pinched to about 7000 barrels daily during the past week, owing to limited pipe line and storage facilities. Yates 6, lease "N" and Yates 2, lease "B," both outside offsets to producers in the field, were preparing to drill in after cementing casing on top of pay early this week.

Landreth Production Corporation, Breckenridge, scored its first oil production on the narrow strip of excess land on the south end of the Church & Fields area during the past week with two wells. Landreth's State 2 gauged 2000 barrels initial from regular lime pay at 2810-95 feet. This well is a north offset to the 4000-barrel well brought in one week ago by Gulf's McElroy 12, which is holding at 3000 barrels daily with the tools on bottom. The tools were left suspended in the hole to retard production until larger lines could be connected up and the sulphur content of the oil crystallized the wire line.

Landreth will complete six wells on the strip before the close of June and is rigging up on two new locations. Landreth is drilling on a strip that is about 400 feet in width and was leased in February for $70,000, half cash and the remainder payable in oil. The production is going to steel storage, built by Landreth, for better prices. The Church & Fields area went to a new peak on daily production during the past week, having averaged 35,635 barrels from 71 wells, or 502 barrels daily per well. This field has 39 drilling tests and 16 rigs going up. Gulf is making a double row of locations on the north end of its McElroy property for drainage protection and made four new locations during the past week. Gulf's 22 wells on the McElroy property averaged 504 barrels daily per well during the past week.

The McCamey district, in southwestern Upton County, added several good producers, including Dixie Oil Company's Burleson 25, located in the Prairie Lane extension pool, with an initial of 800 barrels 27 gravity oil from 85 feet of lime pay at 2035 feet. This well is a west offset to Gulf's 1800-barrel well on the Lane farm. Humble's Ricker 5 opened considerable new area for drilling with an initial flow of 850 barrels 33 gravity oil from the lower pay at 2255-68 feet, with no water showing.

Trinity Sand Well Makes Light Spray of Oil

Mexia, Texas.—Heavy gas production in the Trinity sand test being drilled on the west edge of the Mexia field by E. L. Smith Oil Company et al on the Steubenrauch farm was revived Sunday with a light spray of unusually high gravity oil. This well is producing from the top of the Trinity sand at 5752 feet and is rated good for eight million feet of gas and 20 barrels 48 gravity oil daily. The two-thirds interest in this well and lease held by the Humble and Magnolia was assigned to Mexia parties prior to the reconditioning of the hole. Since a ready market is available for all gas produced in the Mexia area the owners of the well may complete the test at the present depth. This well definitely establishes production in the Trinity for the first time in Texas, although the Trinity pays off in Western Louisiana fields. Magnolia's Trinity sand test on the Marshall farm, near Rice, Navarro County, is running eight-inch casing at 4354 feet to deepen, with no oil in evidence. Magnolia's J. L. Hummers wildcat test, in Cherokee County, bailed salt water early this week at 4329.

Fieldner Appointed to New Position

Washington. — Announcement has just been made from the Bureau of Mines of the appointment of Arno C. Fieldner as chief engineer, Division of Experiment Stations, effective July 1.

Mr. Fieldner has previously been in charge of the Pittsburgh experiment station. In his new position he will correlate the scientific activities of the bureau's experiment stations located at Pittsburgh, Salt Lake City, Reno, Berkeley, Tucson, Seattle, Bartlesville, Rolla, Minneapolis, Birmingham and New Brunswick. At these stations problems dealing with the elimination of waste in the different mineral industries are being studied.

Heavy Drilling Mud Causes Trouble At Pleasant Hill, Louisiana

Attempts to hold back pressure may be harmful to production; Three new wells completed this week

By Staff Correspondent

Shreveport.—Three successful completions were reported in the Pleasant Hill section of Sabine Parish, Louisiana's newest oil field, during the past week. Two of these were brought in by the Arkansas Fuel Oil Company, discoverers of the pool, and the third was completed by the Louisiana Oil Refining Corporation. The Louisiana's well is their first to be drilled by them in this district, and while it is not yet an official completion, its success is assured. Both of the Arkansas' wells are located within the area of proven production, their Logan 2 well, in section 28, due north of their present producing wells, being brought in as a 100 barrel producer, and their Logan 7, in section 33, was completed as a 450 barrel flowing well. Logan 7 is situated due south of one of the first wells completed in the field, and about one-half mile south of Logan 2.

The Louisiana Oil Refining Corporation's Logan 1 well, completed as a 100 to 150 barrel producer, from a depth of 3244 feet, was considered by many as a keen disappointment for, although it may eventually flow, it was thought that this location would yield an even larger well than any previously drilled in the field because of its favorable situation upon the structure. The owners were exceedingly careful in the manner of drilling this well, coring into the sand before and after casing was set, and it is strange to note that very little oil bearing sand was encountered below the Ives sand, commonly referred to as the "first sand." The second, or Arkansas sand, is found at a depth of about 100 feet below the Ives sand in other wells drilled in this area.

Mud Holds Back Oil

Like all other oil producing fields, the Pleasant Hill field is credited with one peculiarity, discovered as the result of several recent completions, and that is the fact that, if heavy mud is used in the drilling in of the wells, it requires several days of continual swabbing and bailing to bring back the oil and gas production, which, seemingly is held back by the action of the mud and water upon the sand. This fact was partially proven at the time the Moffitt extension well was completed. This well was first brought in as a 600-barrel flowing well, ceasing to flow after several hours. It was then thought that the well was not deep enough in the sand and it was mudded up preparatory to drilling deeper. During the process of drilling deeper, heavy mud was kept upon the sand constantly, with the result that the well was never brought back to its initial flow. This, in itself, is not strange; but considering the fact that all of the first wells completed in the field are still flowing, it seems not unlikely that this may be the cause of it being necessary to swab this well to secure production. By failing to flow its initial production, the Louisiana Oil Refining Corporation's Logan 1 well may also be cited as an example of what drilling mud and water will do to the oil producing sands in this field. This location was decidedly the choice location of the field, being directly in the predicted trend of production, and checking favorably as to structure. However, because of the fact that the well blew out while being drilled in, it was necessary to exert a heavy pressure upon the sand; and this pressure may or may not be the cause of the well's failure to flow. In any case, it is considered good policy to drill in all wells with the use of clear water, when possible, and this policy is being carried out by all operators in the field at the present time.

Drilling Deeper at Caddo

It is strange to note that work in the Caddo district, one of the oldest in the State, continues to exceed that of any other section, including the Pleasant Hill field, the newest field, now about four months old. During the past week, five permits for new work were issued to companies operating in the Caddo district, whereas only one new permit was granted in the Pleasant Hill field, the Arkansas Fuel Oil Company having secured permit to drill Logan 10, in section 32-10-12. The urgent need for increased production in the Louisiana and Arkansas fields is, in a measure, responsible for the continued activity in the Caddo area, since the advent of deeper production there has caused operators to deepen their old producers in search of the newer and flush production. Also, a number of new wells are added each fortnight.

The Tunica Petroleum Company and L. C. Swope are about to uncover another Urania pool in the White Sulphur Springs section of La Salle Parish. Several wells have been drilled into the sand by both interests, and plans are now being made to erect standard rigs for pumping. It is reported that oil is standing near the top of the casing in L. C. Swope's Fee wells 1 and 2, both in section 18-9-1e, Grant Parish, and it is said that they will each make 50 barrels of oil when put on the beam. The Tunica Petroleum Company also has one or more wells standing full of oil which they plan to standardize shortly.

Phillips Starts Work

The Phillips Petroleum Company has begun the first of a series of tests which will be drilled in West Carroll Parish east of the Monroe gas field. Location of the first well was made in the northwest corner of the northwest one-quarter of the southwest one-quarter of section 32-20-9e, surrounded by a block of approximately 20,000 acres which the Phillips and others have under lease in this section. All together, a total of about 50,000 acres has been blocked in this vicinity by several of the major oil companies of Louisiana. It is understood that the Palmer Corporation, of Shreveport, also intends to start work on a test well to be drilled on an undivided block of about 35,000 acres which is located in Townships 19 and 20, of Range 10.

A deal has been consumated whereby the Tate Interests are to take over the F. E. Estes et al's Bodcaw Lumber Company well, in section 15-23-12, Bossier Parish, Carterville district, for the purpose of drilling it to the 3100 foot level, at which depth several large gas wells have recently been completed farther southeast. The Estes well was completed as a small pumper during 1924, from a depth of 2721 feet, but was later lost when it became flooded with salt water. W. R. Ramsey is coring at a depth of 3265 feet in his Robertson 1 well, in section 22. The Magnolia Petroleum Company has set and cemented 8⅓-inch casing at a depth of 3084 feet in their Dodson 1 well, in section 15. Aside from these three operations, very little activity is under way in this vicinity, despite the fact that it is only a few months of age. Several large gas wells, completed during the last few months, are now shut in pending disposition of the production.

Activity at El Dorado

Considerable excitement is emanating from the El Dorado district fol-

lowing the showing of oil in the Ohio Oil Company's Crain wildcat in section 1-17-14, Union County, located on a block adjoining that of the Rovenger Oil Corporation's, on which was recently completed a small pumping well. The oil from the Rovenger well is coming from an entirely new producing sand in the Arkansas fields. Very little information can be had relating to the Ohio's well, reports varying from a flowing well to good indications for a pumping well. The best information obtainable, though, is to the effect that the well makes a head of about 33 gravity oil over the top of the crown block each time the swab is run; and has produced 250 barrels of oil, held in steel storage, in this manner. It is thought that the well is now closed in pending arrangements to move in pumping equipment. Depth of the well is slightly below 3000 feet, at which point a string of 4¼-inch casing was cemented. Leasing is said to be very active in the neighborhood of this and the Rovenger well, especially on the part of the two concerns at interest. Both are said to own large blocks already, and each plan to start second test wells at once. The Sun Oil Company is drilling in to make a test of their Thompson 1 well, in section 10-18-13, Urbana-Lawson district. The present test is being made at a depth of 2657 feet, folowing its being bailed dry in the 2500 foot level.

L. D. O'Bryan, E. F. Conner, J. B. Baker, well known and experienced oil well drillers sailed from San Francisco last week for the East Indies where they will remain for one year.

These men have been engaged to drill several deep oil wells and will use he Carter Collapsible Rotary Drill.

Magnolia Water Shipments Increased in Effort to Relieve Storage

Dallas.—Crude Runs by Magnolia Pipe Line Company from Oklahoma, Texas, Louisiana, Arkansas and Kansas during May amounted to 3,251,675 barrels, or an average of 104,893 barrels daily. These runs represent an increase of 1473 barrels above the daily average maintained in April, which was the low mark on crude runs for the first five months of 1927, while the peak was reached in February when daily runs averaged 120,449 barrels daily.

Magnolia's crude production, which is now running in excess of 90,000 barrels daily for the five States, and crude purchases have been exceeding refinery requirements for a number of months. This condition has caused a rapid accumulation of crude stocks at the south end of the company's trunk line system at Beaumont, and record-breaking water shipments of crude took place in May. Magnolia loaded 15 tankers during May with 1,002,953 barrels of mixed grades of crude for delivery to the Atlantic Coast plants of the Standard Oil Company of New York, while the nearest approach to this heavy movement was reached in March, when 755,003 barrels of crude was dispatched to the Atlantic Coast via the water route.

Water shipments of fuel oil and refined oils (gasoline, kerosene, naphtha, lubes, etc.), made during May by Magnolia from the Beaumont refinery remained about the same as the movement reported for April. These products are shipped to the Atlantic Coast and foreign countries. Fuel oil shipments for May amounted to 20,746,813 gallons, as compared to 21,174,778 gallons during the previous month. These two months are the high mark on Magnolia's fuel oil shipments via water.

The tanker movement of refined oils amounted to 31,630,261 gallons.

Oklahoma continues to serve as the largest source of crude supply for Magnolia, and during May the total runs averaged 52,839 barrels, including light shipments from Kansas, as compared to 52,069 barrels in April. Magnolia stored crude in Oklahoma during May at the rate of 10,602 barrels daily, but will soon be in position to handle oil produced and purchased through its trunk line, which is being looped: Magnolia is moving about 8000 barrels daily from the Healdton field via the Pierce line to Fort Worth.

The total crude runs made by Magnolia Pipe Line Company from fields in Oklahoma, Texas, Arkansas, Louisiana and Kansas during April and May follow:

Fields—	April Totals	May Totals
Wewoka-Cromwell	461,163	463,761
Healdton	233,546	218,843
Hewitt-Graham	162,037	209,410
Seminole Dist.	312,028	185,270
Cushing	159,790	162,762
Yale	65,438	68,961
Duncan	52,808	54,453
Augusta (Kan.)	46,348	50,394
Burbank	39,614	19,060
Cement	20,603	15,439
Walters-Beaver Creek	8,688	9,668
Okla. & Kan. Totals	1,562,063	1,638,021
Luling	436,875	432,857
Panhandle Dist.	227,845	230,470
Electra	120,378	116,338
Mirando Dist.	114,486	106,476
Burkburnett	78,232	83,047
Gulf Coast-Spindle Top	35,702	76,244
Archer County	70,979	62,912
Mexia-Wortham	51,007	51,148
Lytton Sprgs.-Lockhart	48,807	44,122
Corsicana-Powell	26,090	25,305
Crane County	7,871	23,901
Desdemona-Comanche	21,052	21,933
Howard-Mitchell Counties	13,847	21,676
Ranger-Olden	13,973	12,949
Stephens County	10,937	11,044
Corsicana (Heavy)	8,240	8,769
Petrolia-Clay County	4,710	4,556
Thrall-Williamson County	1,302	1,213
Panola County	1,415	914
Coleman County	....	140
Texas Totals	1,293,748	1,336,014
Smackover	108,575	135,255
El Dorado	26,037	27,021
East El Dorado	2,538	3,270
Totals for Arkansas	137,150	165,546
Cotton Valley	37,999	41,177
Pine Island	34,076	36,429
Bull Bayou	33,433	30,501
Haynesville	4,117	3,987
Totals for Louisiana	109,625	112,094
Totals for five States	3,102,586	3,251,675

Ventura Avenue Field Production Shows Slump After Agreement

Ventura, Cal.—Through an agreement entered into by the Shell Company, the General Petroleum Corporation and the Associated Oil Company, production in Ventura Avenue field has been reduced from more than 55,000 barrels at the first part of April to a present daily average production of 38,655 barrels. Gas output of the field has been reduced from 201,880,000 cubic feet per day to 157,900,000 cubic feet per day.

Action of the above companies at Ventura has had an uplifting effect upon the tone of California's market and will undoubtedly react to the better interests ultimately of those responsible for the curtailed output of the field.

On April 6, Ventura Avenue's drilling wells numbered 41. Today they number 30, and it is probable that before the end of the week the Associated and Shell each will have taken the crews off two more wells, bringing the total drillers down to 26.

All pumping wells in the field have been shut in by the three operators and a smaller bean has been put on all flowing wells of these operators. Reducing the beans has resulted in an increased pressure, which seems to be accompanied by a change for the better in the class of oil produced. Wells that produced 30 degrees gravity before being pinched in are producing a little better than 31 degrees gravity oil.

Favorable results in the gasoline extraction phase are developing from the policy of conservation in Ventura Avenue. Heretofore plants in the field were worked beyond capacity, and with the accompanying loss in efficiency, the yield was low. The recovery per thousand cubic feet has been increased to 0.89 gallons by decreasing the volume of gas produced and eliminating the possibility of overworking gasoline plant capacities.

Seal Beach Jumps 21,000 Barrels As Wells Show Large Flush

General Petroleum Corporation cored 10 feet of oil bearing sand from 5256 feet to 5265 feet

By BRAD MILLS
Staff Representative

LOS ANGELES.—The Seal Beach field, after showing a decided drop in production, has again sprung into the limelight with an initial production of more than 21,000 barrels during the week ending June 11. Thirteen producers were added during the week and the average daily production totaled 74,540 barrels as compared with 53,810 barrels during the previous week. Thus a new record has been established for California's newest sensational field, and this in the face of predictions that the peak had been passed. More large producers were completed than at any time for several weeks.

The petroleum Securities Company jumped to the front with the largest initial production recorded in the field, with five producers yielding 8150 barrels. The largest producer completed was Bryant A-4, which came in with an initial production of 2535 barrels. The 8⅝-inch casing was set at 4632 feet and the well completed at about 4880 feet. The crude tested 26.9 gravity. The company's Brice 1, with an initial production of 2200 barrels, was also one of the largest completions of the week. The Selover sand was found several feet deeper than in Bryant A-2 but the well was completed at about 4875 feet or a few feet shallower than the largest producer. Bryant A-2 and Naples 3, with 1630 barrels and 1500 barrels initial production, respectively, were other large wells completed by the company. Naples No. 6 was the only small well of the five completed. It had an initial production of 285 barrels and was completed at 4807 feet. The company brought its total production in the field to 11,565 barrels as of June 11, as compared with a production of only 3890 barrels on June 4.

Deep Sand Disappointing

Los Angeles—Signal Hill, the wonder field of the Los Angeles Basin, has failed to develop anything startling in the way of a new sand in response to exploration work being done by the California Petroleum Corporation.

Calpet's Flowerstate 1 was put on production at 5,500 feet, a depth which marks the bottom of approximately 600 feet of streaked oil bearing strata, and made only 150 barrels. It was generally predicted the well would be a commercial proposition.

On the Cresson property, the Shell Company of California soon will test its Cresson 7 at 5,379 feet. It is understood this well will draw on about 400 feet of zone considered capable of producing oil.

The Richfield Oil Company completed Bonner 1, with an initial production of 3000 barrels. It was one of the largest completions of the week and indicates that the field is still a candidate for further honors. The 8¼-inch casing was set on the Selover sand at 4736 feet and the formation drilled to slightly more than 4900 feet.

George Getty gave an excellent account of himself by completing two large producers. His well, No. 9, with an initial production of 3125 barrels, was the largest completion of the week. The well was completed at 4860 feet. Number 8 was completed at 4861 feet with an initial production of 1637 barrels. A third and smaller well, Number 10, was completed at slightly above 4800 feet with an initial production of 800 barrels. Getty now ranks near the top of all the producers in the Alamitos section of the Seal Beach field with a daily average of 13,975 barrels. This is a very high production when it is noted that he has only 10 wells on production.

Calpet Gets Well

California Petroleum Corporation scored again during the week with a 1600 barrel completion. Lovell No. 1 was the deepest well completed in the field during the week, having been finished at about 4954 feet. The 6⅝ casing was set at approximately 4900 feet. Another important completion was the South Basin Oil Company's 1, which came in with an initial production of 2590 barrels from a total

SEAL BEACH OPERATIONS

Company	Drlg.	Rigs	Lcn's	Prod.'s	Operations	Prod.
Ahlburg	1	..	..	..	1	....
Fred Aitkin	..	1	..	..	1	....
Associated	6	2	3	9	20	11,760
T. Bailes	1	..	..	..	1	....
Bankline Oil	..	1	2	..	3	....
H. J. Barneson	..	4	..	1	5	225
R. Burns	..	1	..	..	1	....
Calif.-American	..	..	1	1	2	470
Calif.-Eastern	12	6	..	1	19	1,000
Calif. Pet. Corp.	6	1	..	3	10	3,910
Coastal Oil Co.	1	..	..	..	1	....
Commercial Inv. Co.	..	1	..	..	1	....
E. L. Cragen	..	..	1	..	1	....
Dill-Comstock	2	..	..	..	2	....
Dominguez Extension Oil.	1	..	..	..	1	....
Dudley-Ochermann	..	1	..	..	1	....
Dutton	..	..	1	..	1	....
F. Erwing	1	..	2	..	3	....
H. Fisher	..	2	..	..	2	....
General Pet. Corp.	1	9	..	3	13	125
George Getty	3	..	1	10	14	13,975
Paul Getty	3	1	1	2	7	1,885
Ed. B. Griffin	..	2	..	..	2	....
Hart & Co.	1	..	..	..	1	....
Nathan Hale	..	..	1	..	1	....
Hauser Pet. Corp.	1	..	..	..	1	....
Hughes & Richmond	..	1	..	..	1	....
Italo American	1	..	..	..	1	....
Al Johnson	..	1	..	..	1	....
Sam Johnson	1	..	..	..	1	....
Loftin Oil Co.	1	..	..	..	1	....
Marland Oil Co.	9	7	1	12	29	14,030
W. E. McCaslin	1	..	..	..	1	....
McAlpine	1	..	..	..	1	....
McCoy-Deeds-Cathers	..	..	1	..	1	....
A. N. McKrate	1	..	..	..	1	....
Max McVey	..	1	..	..	1	....
Miley Oil Co.	1	..	..	1	2	265
M. W. Pannill	1	..	..	..	1	....
Petroleum Securities	25	4	..	11	40	11,565
Rainbow Petroleum	1	..	..	..	1	....
Richfield Oil	1	..	..	1	2	3,000
Ring Pet. Co.	1	..	..	..	1	....
Fred Roberts	..	1	..	..	1	....
J. T. Robertson	..	..	..	1	1	50
Smithson & White	1	..	..	..	1	....
South Basin Oil	..	..	..	1	1	2,590
Standard Oil Co.	2	2	..	11	15	8,120
Superior Oil Co.	2	3	1	3	9	1,070
Travis Drilling Co.	..	..	..	1	1	500
Union Pet. & Drilling Co.	..	1	..	..	1	....
Universal Cons.	3	..	..	1	4	200
Fred Walker	2	1	1	..	4	....
Waklin & Peacock	1	..	..	..	1	....
Wallace & Failing	1	..	..	..	1	....
J. G. Wheeler	1	..	..	..	1	....
White Eagle Pet.	2	3	1	..	6	....
J. Woodward	..	1	..	..	1	....
Totals	100	58	18	73	249	74,540

depth of 4857 feet. The 4¼ casing was set at 4702 feet. This amount includes 155 feet of perforated casing. The Marland Oil Company kept in the running with the completion of its Bixby 12 at 4750 feet. The initial production was 1140 barrels. The completion was one of the shallowest of the week. The General Petroleum Corporation completed a very small well in its Wassem 3, which had an initial production of only 13 barrels. The well may clear up and make a better producer or the company may work it over, it is thought.

An unusual development of the week in the Seal Beach field was the discovery of a possible oil-producing sand at 5256 feet. The General Petroleum Corporation cored through 10 feet of oil-bearing sand from 5256 feet to 5266 feet. There were streaks of brown shale from 5266 feet to 5277 feet. Brown shale was also found from 5239 feet to 5256 feet. This well is the first one to be drilled to such a depth in the field and is unusual because it did not find either the Bixby or Selover sands. The possibilities of the new sand can not be predicted with even the least degree of accuracy. Whether it may be thicker or shallower in other parts of the field is merely a matter of conjecture.

While the jump in production in the field was very large and more or less unexpected, it is not considered especially alarming. It happens that a large number of wells in productive territory were near the sand and they were completed in one week. Then, too, due to the town lot nature of the drilling campaign, this increase is expected to be short-lived. Due to the nature of production in the field, it is rather a difficult problem to predict a definite trend during the next three weeks. After that period however, the trend is expected to be definitely downward.

The exact status of operations of all companies in the field as of June 11 follows:

Magnolia Completes Gas Line to Dallas

Dallas,—Magnolia Gas Company finished welding work on its gas line extending from Latex station, located near the Texas-Louisiana line, to Dallas and Fort Worth June, and will be delivering natural gas to industrial consumers in the latter two cities about June 15. This line was completed several weeks ahead of schedule, having started about February 15. It materially enlarges the market outlet for the surplus gas produced in Panola County, Texas, and the various fields in Northwestern Louisiana.

This line is made up of 210 miles of 14-16-18 inch welded pipe, and is an extension of the large system operated by the Magnolia Gas Company from North Louisiana and Northeast Texas to Beaumont. The Dallas-Fort Worth extension is served by the same gathering system as that used by the Beaumont unit, and the principal booster station for both lines is located at Latex, Panola County, Texas.

One booster station at Mineola, Wood County, is located on the Dallas-Fort Worth line, and initial gas deliveries to the latter two cities is expected to range from 40 to 50 million cubic feet daily. The smaller sizes of pipe are used on the line leading out of the Latex and Mineola stations.

The Latex Gas Company, subsidiary of the Magnolia Gas Company, will distribute the gas within the city limits of Dallas and Fort Worth to industrial consumers, while both domestic and industrial gas connections will be given the small towns along the route of the line by the Latex.

Pierce Junction Gasser Burns Three Days

Houston.—Late Tuesday afternoon efforts were still being made by workmen and field superintendents of the Rio Bravo Oil Company to remove the derrick ruins, drawworks, etc., on B-3, which has been burning at Pierce Junction since Saturday of last wek.

The well blew out while efforts were being made to reset screen, on the morning of June 11. A spark created by a rock striking the crown block ignited the gas and started the fire which has defied efforts of the crew fighting it for three days and nights.

No opportunity has been given to measure the gas flow of the well, but it blew many feet higher than the surrounding derricks when the well first caught fire. The rig and derrick on the well are a total loss.

So intense has been the heat that no holds could be obtained on the tangled steel around the well. Cables and chains were burned in two before anything could be moved, and the only headway that has been made has been since the pressure has decreased, cutting down the flames considerably.

The fire has been confined to the one well, inasmuch as the nearest other well has had the advantage of a strong wind blowing against the blaze. Pumping wells further away were immediately shut down and oil drained from nearby field tanks.

Steam lines have been laid and there are sufficient boilers in the field to snuff out the flame as soon as the wreckage can be cleared away enough to allow the steam to be blown where it is needed.

B-3 is one of the southernmost wells in the field and had previously been completed for about 1000 barrels of oil. It then sanded and efforts were being made to re-set screen. The old screen was pulled out of the hole and acted as a sort of swab removing all the mud, so that the gas had little pressure to overcome. The gas is coming from a sand at approximately 3500 feet.

The fire is one of the most spectacular happenings in the history of Pierce Junction. The long string of people who journeyed to the field to see the burning gasser recalled to mind similar crowds that viewed the old "Methuslah" well which used to blow out periodically, scattering oil and sand over several hundred feet of surrounding territory. This well was in the old part of the Pierce Junction field and is now completely dead.

B-3 is in the west extension across the dome from the old section.

"Friendship" Meetings Get Start at Dallas

Dallas.—Fort Oil men were the luncheon guests of members of the fraternity in Dallas Friday for the first of a series of inter-city gatherings being sponsered by the Texas division of the Mid-Continent Oil & Gas Association. Ten Dallas members of the association were recently appointed by J. D. Collett, president of the Texas division, to serve as a "wildcat committee" in arranging the program for the entertainment of the Fort Worth oil men, with R. A. Wilson of the Guiberson Corporation as chairman of the committee.

The purpose of the luncheon meetings is to promote friendship and broaden the acquaintances of the operators, and the idea was obtained from the success made of inter-city meetings held by California oil men. Fort Worth oil men plan to entertain those in Dallas in the near future, while other oil centers in the State are planning to organize "wildcat committees."

Captain J. F. Lucey presided at the luncheon meeting, and talks were made by J. D. Collett, Lieut. Gov. Barry Miller, R. A. Wilson, W. A, Moncrief, vice president in charge of Malrand's activities in Texas, voiced the appreciation of the Fort Worth oil men for the hospitality shown by their neighbors, and accepted the challenge made by the hosts for a golf tournament. Carl Baker of Coalinga, Cal., who has invented a number of oil field specialties, also made a brief talk .

The Dallas "wildcat committee" consisted of R. A. Wilson, chairman; Capt. J. F. Lucey, John G. Pew, W. L. Todd, W. H. Francis, R. R. Penn, R. A. Crawford, Chas. Fitzgerald, R. B. Whitehead and Joe P. Laney.

To Fly to Casper

Casper.—Within the next 30 days officials of the Standard Oil Company of Indiana will make a non-stop flight from Chicago to Casper, according to a report now current in Casper. The trip is to be made in the company's new 8-passenger airplane which has been specially built for such journeys. The ship is one of the new 3-motor planes, modern in every respect and constructed for the utmost comfort of its passengers.

To Abandon 20 Wells

Casper, Wyo.—Laramie Oil Development Company has applied to U S. G. S. to be permitted to abandon 20 shallow old wells, section 6-15-75, in the southern part of the state. Wells were pumped at one time and produced a few barrels per day of heavy grade crude. Most of the material has been moved elsewhere from the wells.

Fundamental Criteria for Oil Occurrence[1]

By FREDERICK G. CLAPP[2]

(Continued From Last Week)

CRITERIA for oil occurrence are considered as being grouped into (a) fundamental criteria and (b) secondary criteria. This paper pertains mainly to those in the first group. Although geologists once considered that only three or four criteria must be affirmatively answered in order to predict oil occurrence, these have been supplemented from decade to decade, so that no less than eight fundamental criteria are now enumerated, all of which must be answered affirmatively if a district or locality is to be considered favorable for oil. These criteria are discussed in their various aspects and inter-relations. In addition to a discussion of the fundamental criteria, a list of secondary criteria is given with the intention of making it the subject of an independent paper at a later date.

THE word metamorphism is broadly used by geologists to denote all internal changes in character that rocks undergo after their original deposition or formation. Metamorphism is of great interest to petroleum geologists because it demarks immense regions of the earth where oil does not exist in commercial amounts.

We are in the habit of considering the question of metamorphism in a twofold sense. First, are the rocks *destructively* metamorphosed, or to an extent that they can hold no oil? If so they are generally hardened, veined, mineralized or noticeably altered so that extreme metamorphism is apparent, even to a novice. Whatever may be the origin of petroleum, we know from experience that it is never discovered commercially in igneous rocks, except under very rare and minor conditions constituting a "freak" occurrence. Moreover, oil is not found in the ancient metamorphic rocks which are greatly distorted by folding over wide areas and in which evidence of internal metamorphism are visible due to heat or pressure. Thus we may at the outset exclude from consideration rocks of the igneous and intensely metamorphic groups.

Secondly, if rocks are not destructively metamorphosed or altered to such a considerable extent, have changes taken place of a more moderate type such as might be indicated by an adverse carbon ratio in coals or shales or determined by the change in amount or quality of certain waters or of water of cystallization or by microscopic or macroscopic mineralization?

Judging by some opinions expressed to the writer it may be necessary to add a third sub-criterion in the consideration of metamorphism. Whereas the first and second factors named are those of too great metamorphism to permit the present occurrence of oil or gas, it may be necessary to consider whether, on the contrary, there may have been too little metamorphism to have formed or accumulated oil or gas. We sometimes consider that Pleistocene beds of slight folding have this defect. May such a condition not also prevail in Tertiary beds? So far as known to the writer, this question has been answered in the abstract but not satisfactorily with reference to any particular region.

The last mentioned doubt involves much theory, which it is not proposed to enter here. The relation of metamorphism to pressure and heat is seriously involved, and brings us again to the question of origin, which has been already passed.

Until within a few years, geologists were unable to explain the absence of oil near some of the principal mountain systems of the world; and no guide had been discovered by which they could delimit the unmetamorphosed regions where oil may be expected from the regions of metamorphism where it evidently does not exist. In 1915, however, White's paper[3] appeared showing that in regions of Carboniferous coal beds the ratio of fixed carbon decreases in a regular manner from the anthracite regions or those of semi-bituminous coals to the softer bituminous coal regions, and that in going from soft to harder coal regions this ratio passes a line beyond which no commercial oil fields may be expected.

The discovery of wells producing naphtha or "whale oil" in regions of metamorphism beyond the critical carbon ratio might seem to controvert the value of this criterion; yet no large fields have been proved beyond the critical ratio and it is doubtful if any such fields have "paid out."

The value of the test by *isovols* was subsequently checked in papers of Fuller[6], Semmes[7] and others. Many geologists are inclined to doubt the efficacy of carbon ratios, yet in general where carbon ratios have been studied we find that oil fields of commercial importance seldom exist beyond the 63 per cent line of fixed carbon and that commercial gas fields seldom exist beyond the 75 per cent line. Carbon ratios also doubtless change with increasing depth in any locality, but this subject has been less studied than the ratios in surface rocks.

We can hardly doubt that the carbon ratio of a locality or formation is of some value as a criterion, and subsequent work will tell the full story of its utility.

Structural Criteria

The last great class of criteria considered here comprises those of a structural nature. In the early days of oil geology, structure was the principal and almost the only factor studied, after elimination of the large areas of igneous rocks and those of obviously intense metamorphism. With advance of the profession the factors discovered in preceding paragraphs have been recognized and their importance appreciated, and structural geology, although as important as ever, has had to take its place as the final fundamental criterion, with one exception.

We need here not distinguish between deformational structure and that due to thickening or thinning of a sandstone along its roof or to subsidence of sediments during consolidation over a previously existing land mass. Any one of these types, when causing suitable structure, and with the presence of the other fundamental criteria, may permit the occurrence of oil.

In 1910 the structural classification[8] was proposed and it was published in full in 1917[9]. As a record of the known subcriteria under "Structure," this classification is reprinted in Table VI. Its object is to describe the different types of oil and gas accumulations or occurrences by grouping them into classes, each division of which constitutes a special type of structure.

Table VI

Classification of Oil and Gas Structures

I. Aclinal or subaclinal structure.
II. Anticlinal and synclinal structures.
  (a) Strong anticlines standing alone.
  (b) Well defined alternating anticlines and synclines.
  (c) Broad geanticlinal folds.
  (d) Overturned folds.
  (e) Lenticular nature of the sands.

[1]Read before the American Association of Petroleum Geologists, Tulsa meeting, March 26, 1927. Printed in the Oil Weekly by courtesy of the Bulletin of the American Association of Petroleum Geologists.

[2]Consulting geologist and petroleum engineer, 50 Church Street, New York City.

[3]David White: "Some Relations in Origin between Coal and Petroleum", **Jour. Wash. Acad. Sci.**, Vol. V, No. 6, 1915, pp. 189-212; **Bull. Geol. Soc. America**, Vol. XXVIII, 1917, pp. 727-734.

[6]M. L. Fuller, "Relation of Oil to Carbon Ratios of Pennsylvania Coals in North Texas", **Econ. Geol.**, Vol. XIV, No. 7, 1919, pp. 526-42; Carbon Ration in Carboniferous Coals of Oklahoma and their Relation to Petroleum", **Econ. Geol.**, Vol. XV, No. 3, 1920, pp. 225-255.

[7]D. R. Semmes, **Mining and Metallurgy**., Bull. No. 159, March, 1920.

[8]F. G. Clapp, **Proc. Eng. Soc. W. Pa.**, Vol. XXVI, No. 4, 1920, pp. 87-120; Econ. Geol., Vol. V, No. 6, 1910, pp. 503-521.

[9]..... "Revision of the Structural Classification of Petroleum and Natural Gas Fields", **Bull. Geol. Soc. Amer.**, Vol. XXVIII, pp. 533-602, 1917, 20 figs.

III. Monoclinal structure.
- (a) Monoclinal noses.
- (b) Monoclinal ravines.
- (c) Structural terraces or "arrested anticlines."
- (d) Lenticular nature of the sands.

IV. Quaquaversal structures, or domes.
- (a) Anticlinal bulges or "cross-anticlines."
- (b) Monoclinal bulges.
- (c) Closed saline domes.
- (d) Quaquaversal structure caused by volcanic plugs.
- (e) Perforated saline domes.

V. Contact of sedimentary and igneous rocks.
- (a) Contact of sedimentaries with volcanic plugs.
- (b) Contact of sedimentaries with dikes.
- (c) Contact of sedimentaries with intrusive beds.
- (d) Contact of sedimentaries with other igneous rocks.

VI. Strata dipping unconformably away from an old shoreline.

VII. Crevices of igneous rocks.

VIII. Crevices of sedimentary rocks.

IX. Faults.[10]
- (a) Upthrow side.
- (b) Downthrow side.
- (c) Overthrusts.

X. Oil deposits sealed by bituminous deposits.

Unfortunately this classification has been considered by many persons as an argument in favor of the "anticlinal theory," whereas it was intended not as an argument for any theory, but merely as a statement of the types of structures on which oil occurs and the relations of oil to such structures, whether they be anticlinal, synclinal, monoclinal, or quaquaversal.

Many geologists have contributed in supplying new types of oil occurrences from time to time. The chief alternative classification known to the writer was proposed by Johnson and Huntley and was termed by them "a classification of the attitude of geological surfaces."[11] The prime divisions of their classifications were given as aclines, homoclines, domes, level-axis anticlines, plunging-axis, anticlines, noses, and synclines.

Structural criteria may be grouped briefly into several essentials, generally given careful consideration by a geologist, but which in view of their nature, do not permit enumeration as part of any structural classification. Or, if they could be enumerated, they would not partake of the nature of sub-classes or sub-types of structure, but as qualities due to various structural types. Some of these conditions are, size, height, breadth, flatness, amount of closure or its absence, and lastly the size of the "collecting area" (occasionally termed in geologic parlance the "drainage area"). It appears that none of these conditions has any definite effect on the existence or amount of production. Yet most geologists may be inclined to express themselves on the merits of the following statements as applicable after the other criteria have been found satisfactory:

1. A dome or anticline of small size will now seldom be avoided by most oil geologists. On the other hand, a dome of great proportions has been in many cases found too large to concentrate oil in commercial quantities except in superimposed "pimples."

2. A high dome or anticline is presumed to be advantageous; but it may be so high as to have lost the oil or gas from its crest through metamorphism or erosional leakage.

3. Some geologists have considered a broad anticline as favorable for gas and a narrow one for oil; but these hypotheses can hardly be said to be more than of very general application even if true at all.

4. In moderately dry sands a flat structural crest has generally trapped more oil than a sharp one. In water-saturated sands little effect may have ensued from differences of flatness.

5. Where a sand is absolutely dry the oil is generally in the synclines.

6. Height of "closure" may mean much or little. However, in areas of great hydrostatic pressure the oil may have been pushed out of a structure having slight vertical closure, but held in one of consideable closure.

7. The size of the "collecting area" or "gathering area" is unquestionably important. Where this area is small, a relatively minor amount of oil is generally collected from it on the favorable structure, whatever the cause of the migration may be. The size of the "collecting area" may be the most important of the modifying influences under structure.

Hydrostatic Criteria

If this were a paper on oil *accumulation* the importance of moving underground water as a primary cause of migration would be obvious. This theory has been discussed by Rich[12], but the subject of oil *occurrence* only necessitates its discussion insofar as water effects the place of collection or the occurrence of the oil. For present purposes it is not necessary to determine whether oil is concentrated in a structure under conditions explained by the "anticlinal theory," to the "structural theory", to Buoyancy of oil on water or by the relative specific gravities. What does concern us is the existence or non-existence of (a) water at a level which has permitted oil to reach its equilibrium on a structure, or (b) currents of water strong enough to have forced oil out of a structure. In other words, the hydrostatic conditions that would be considered prohibitive to the occurrence of oil on structural "highs" would be (a) absence of water and (b) dangerously great pressure of circulating water (taking into consideration the amount of closure, if any, on structures from which oil might be driven by this pressure).

Since we have not discussed the merits of the "anticlinal theory" under the heading of "structure" we need not touch here on the "hydraulic theory."[13] The removal of oil or gas accumulations by the action of moving water has been called "flushing." This is "to be expected where altered physiographic conditions cause a change from slow to rapid water circulation." In the San Juan Basin of New Mexico and many basins of Wyoming and southern Montana the structures near the mountains are full of water which has flushed out the oil, and wells drilled on them thus yield artesian water instead of oil. The importance of water in the migration of oil was discussed by Munn many years ago.

Secondary Geologic Criteria

The criteria discussed previously in this paper are classified as "fundamental criteria." Assuming now that a possible source of origin be known that seepages exist, that the ages of certain existing strata are identical with those in some known field, that porous sandstones or limestones or other suitable containers underlie the region, that they are overlain by satisfactory impervious cover, that suitable conditions of non-metamorphism have been proved or inferred and that correct types of local geologic structure exist, still we may be obliged to report adversely on a region, on account of any one of several factors which may conveniently be termed "secondary criteria." In other words, reconnaissance or detailed studies may have resulted in the discovery of unfavorable factors in some one or more than one of the following circumstances in addition to the so-called *fundamental* criteria:

1. Faults may exist. These may or may not be favorable to oil or gas occurrence, according to their age, magnitude, position, cause, or type.
2. Crevices and fractures may exist and may be favorable or unfavorable.
3. Favorable porous beds, though present, may lie at such great depth that we must inquire whether or not they can economically be reached by drilling.
4. Although porous beds be present, they may lie on the surface, so that a certain amount of the oil or gas may have escaped.
5. "Sands", though present, may be of insufficient porosity to hold oil or gas in quantity or they may be too fine-grained or dense to yield fluids readily by flowing or pumping.
6. The deposits may be not of near-shore deposition, and one must inquire the bearing of this stratigraphic type on oil occurrence.
7. On the basis of drilling certain beach, bar, spit or river channel conditions may have been found to exist in the

(Continued on page 94)

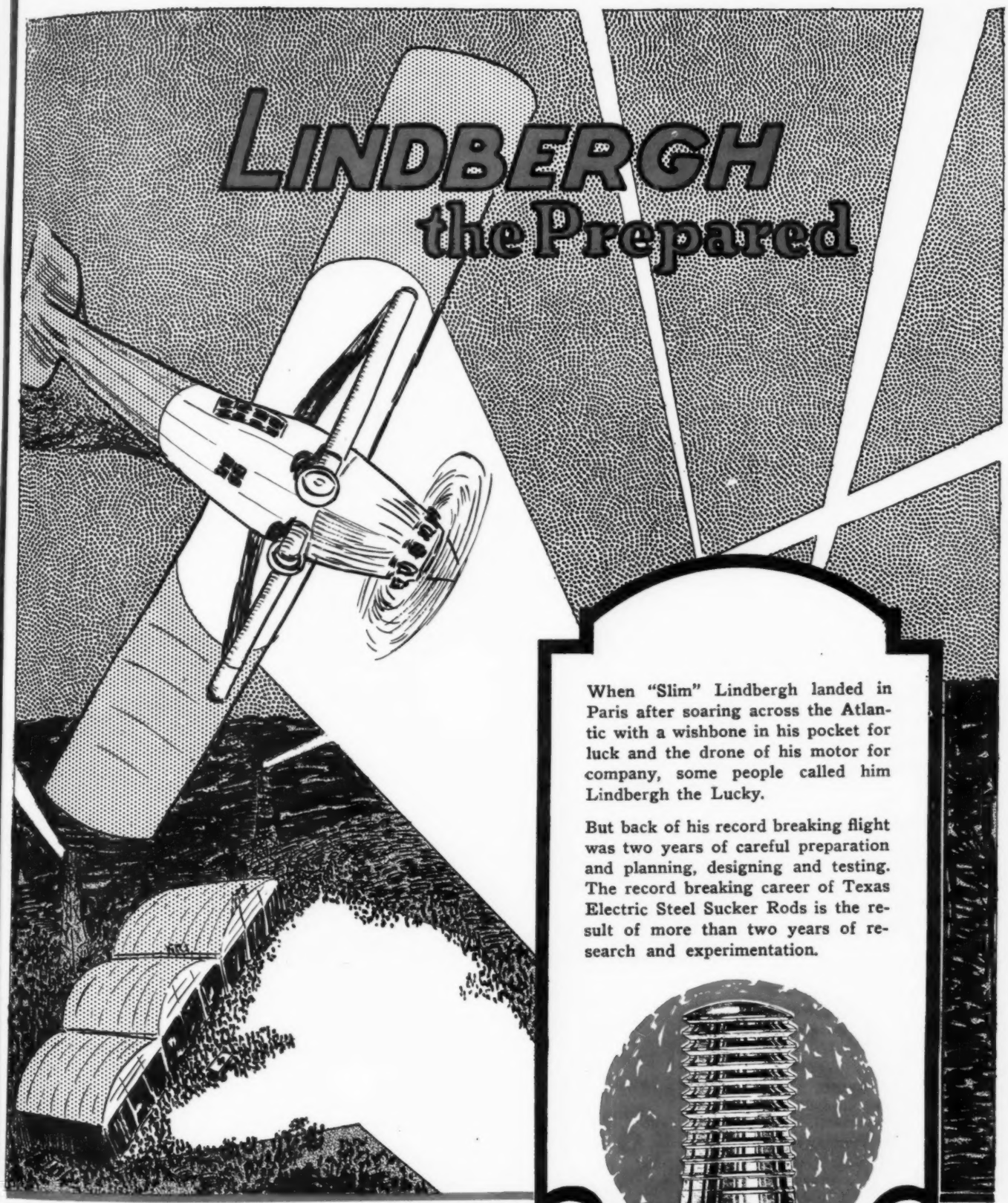
[10]Distinction should be made between (a) transverse faults like those in the Salt Creek field, (b) longitudinal sealed faults, and (c) sheer faults like those of Central Oklahoma.

[11]Roswell H. Johnson and L. G. Huntley, **Principles of Oil and Gas Production**, New York, 1916, pp. 63-78.

[12]John L. Rich, **Econ. Geol.**, Vol. XVI, No. 6, 1921, pp. 347-371.

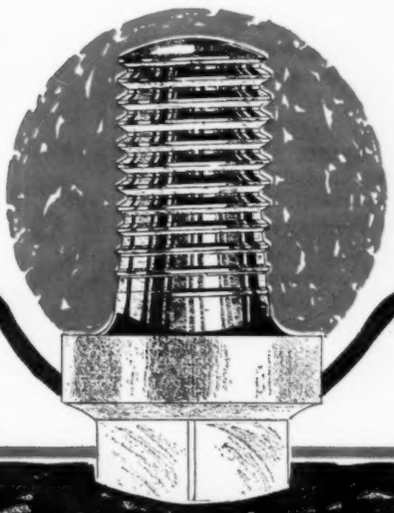
[13]Simplified by John L. Rich, "Further Notes on the Hydraulic Theory of Oil Migration and Accumulation", **Bull. Amer. Assoc. Petrol. Geol.**, Vol 7, 1923, pp. 213-25.

LINDBERGH the Prepared



When "Slim" Lindbergh landed in Paris after soaring across the Atlantic with a wishbone in his pocket for luck and the drone of his motor for company, some people called him Lindbergh the Lucky.

But back of his record breaking flight was two years of careful preparation and planning, designing and testing. The record breaking career of Texas Electric Steel Sucker Rods is the result of more than two years of research and experimentation.



TEXAS STEEL CO.

ELECTRIC STEEL MAKERS, ROLLERS AND FINISHERS

FORT WORTH, TEXAS

PERSONAL MENTION-MEN YOU KNOW

Los Angeles—George Frazier, formerly of the petroleum department of the Westinghouse Electric and Manufacturing Company, California division, has recently resigned to join the organization of the Oil Well Supply Company of California. Mr. Frazier, who is well known to West Coast oil men as "George," has been with the Westinghouse Company for the past 28 years, having been employed in the petroleum department since 1910, working in the field of oil industry electrification. He has taken a very keen interest in the Hild Drive and its development since its introduction to California oil men five years ago. The experience covering many years makes him especially fitted for his work with the Hild in his new connection with the Oil Well Supply Company.

Harry Botsford, special feature writer and advertising counsel of Titusville is making a tour of the Mid-Continent and Gulf Coast fields. Mr. Botsford has visited Tulsa, Seminole, Shreveport and Houston.

The many friends of A. J. Carr, president of the American Seamless Tube Corporation, will be glad to know that he is recuperating from an automobile accident in which he was severely injured several weeks ago. The accident happened near Fort Worth, Texas, and Mr. Carr was confined to a hospital there for a few weeks. He was later sent to Los Angeles, where he now is. He is still confined to the hospital but is able to dictate letters and keep up a part of his work. He was formerly with the Lucey Corporation in Houston.

The Union Oil Company of Cal. announces the appointment of Mr. S. D. Hekner as division manager. This office is newly created and has for its purpose the direction, supervision and education of the personnel of the company in Los Angeles City, Hollywood and San Pedro district.

A. A. McDonald, California district manager for the Hughes Tool Company, Houston, has returned to the job, with his usual pep and energy, although minus a few pounds, after a recent illness of the type popularly known as the "flu."

Fort Worth Engineers to Hold Meeting

Fort Worth.—Petroleum engineers living in Fort Worth are organizing the Fort Worth chapter of the American Institute of Mining and Metallurgical Engineers.

The first meeting of the new chapter will take place shortly. E. O. Bennett, of the Marland Oil Company in Texas, is the temporary chairman of the program committee. He is now working out a program.

R. H. BARTLETT

OF TULSA, INDEPENDENT OIL PRODUCER AND FINANCIER, PRESIDENT OF THE BARTLETT OIL CORPORATION, ALSO THE DIRECTING HEAD OF THE BRADEN COMPANY AND THE UNION WIRE ROPE COMPANY OF TULSA.

Ralph Arnold and associates have incorporated the Standard Petroleum Company of New Mexico, to drill several wells in the Rocky Mountain district, two of which will probably be drilled in Montana.

The company has under lease about 300,000 acres for wildcat testing. The advisory board consists of Mr. Arnold, C. C. Magenheimer, Dr. Harland Shoemaker, D. B. Head, John H. Blair, J. W. Browne and Eliott Kelly.

Operations of the Standard Petroleum Company will be kept separate from the Montana Pacific Company, it is announced. Ralph Arnold is also heavily interested in the latter company.

M. F. Waters, general manager of the Smith Separator Company, Tulsa, recently made an overland trip to Chicago. He was accompanied by L. W. Brown, sales manager for the Fisher Governor Company; J. D. W. Gardner, owner and manager of the Hydrolt Pipe Covering Company, and James E. Gibbons, sales manager for the Victaulic Company of America.

J. H. Kountz, Mid-Continent representative of the Pacific Wire Rope Company of Los Angeles left this week for a 10 day visit at the factory, and will make a short trip through the oil fields in the Los Angeles Basin. Mr. Kountz, before going with the Pacific Wire Rope Company was connected with the Continental Supply Company for a number of years and is well acquainted over the oil country in the Mid-Continent territory. Lucey Products Company distributes the Pacific line of wire ropes in the Mid-Continent.

H. P. Bostaph, sales manager of the Texas Steel Company, recently announced that Paul Reid, formerly assistant auditor of the Houston Oil Company, is now identified with his company as field representative, and that Dan D. E. Hudgins of Shreveport, La., has been appointed district representative for the Texas Electric Steel Sucker Rods in that territory. These appointments are in line with the company's policy for expansion to accommodate the increased demand for electric steel products.

Boettcher & Co. and Gregg, Whitehead & Co. head a new syndicate which has taken over control of Colorado Airways, Inc. Some of Denver's most prominent business men are members of the syndicate.

Guy Danielson, who for several years has been connected with the sales department of the Reed Roller Bit Company, has resigned his position with that company to become associated with the Bridgeport Machine Company, Wichita, Kan., who are introducing a new rotary rock bit.

Grant Blanchard, in charge of the Marland Oil Company's developments in Southeast New Mexico, has recently opened Marland offices in the city hall building at Carlsbad, N. M.

Half Million Pounds

Carried by a Moore Derrick

over Amerada's Forest Anderson No. 1, near Earlsboro, Oklahoma

The performance of this 4", 123' rotary relegged derrick under tremendous load illustrates the dependable strength of Moore Tubular Steel Derricks.

Use the strongest Derrick
Moore
TUBULAR STEEL DERRICKS
MOORE uses Steel in its most rigid shape—the Tube—with a joint that is stronger than the section itself—the Moore Patented Clamp. The result is unquestionably the strongest derrick made.
Tubular steel is the strongest section, with the greatest rigidity per unit of weight, that can be used to carry compressive loads.
Strong as is the steel tube, tests show the clamped and braced joint to be the strongest part of a Moore Tubular Steel Derrick.
The Moore is strongest.
World Wide Service for Twenty Years
LEE C. MOORE & CO., Inc. PITTSBURGH · TULSA
DALLAS, TEXAS CASPER, WYO. HOUSTON, TEXAS SHREVEPORT, LA. WICHITA FALLS, TEXAS EL DORADO, KAN. BORGER, TEXAS EL DORADO, ARK. PARKERSBURG, W. VA.

World Wide Service for Twenty Years

When Amerada's Forest Anderson well No. 1 had reached a depth of 4287 feet, the pipe was dropped while 6-inch casing was being run, after 139 joints had been lowered into the hole.

Seven lines were strung to fish for the casing and 4½-inch 32 lb. hydraulic pipe was used. 76 joints were thus recovered but as the pipe was pulling very hard, nine lines were strung in the derrick. The pipe still refused to come and a bull hitch, using a 1¼-inch dead line, was decided on. This broke the wooden walking beam.

Two oak timbers, each 14"x14"x16', placed one on top of the other, were then installed. One end rested on the samson post and the other was supported by a joint of 15½-inch casing. Next, the dead line pulled in two and a 2-inch line, which was substituted, also failed. A new one was installed but the pipe still refused to come.

Two 125 ton hydraulic jacks were then installed and the pipe was jacked up to the limit of the jacks. But it still held fast. **It was then found that it was possible to lift the pipe off the jacks with the derrick,** so their use was abandoned and straight pulling resumed. As the capacity of each jack was 250,000 pounds, the derrick carried a load in excess of 500,000 pounds.

A 12x12 engine with two balance rims attached, and a steam pressure of 175 lbs. was used during the fishing operation.

LEE C. MOORE & CO., *Inc.* PITTSBURGH · TULSA

Established 1907

DALLAS, TEXAS **HOUSTON, TEXAS** **WICHITA FALLS, TEXAS** **BORGER, TEXAS** **PARKERSBURG, W. VA.**
CASPER, WYO. **SHREVEPORT, LA.** **EL DORADO, KAN.** **EL DORADO, ARK.**

Say you saw it in The OIL WEEKLY

Rise in Russian Business Helps Oil Industry

(Continued from page 33)

30 pounds in these years and in the villages and country from 3.3 to 9.35 pounds. This seems to indicate that the per capita consumption is still below pre-war level, notwithstanding the fact that the tractor, entirely unknown to pre-war Russia, makes a large and growing demand for kerosene. The kerosene market is increasing rapidly in other directions, however, owing to the expansion into new districts and penetrating into most isolated localities. The consumption for 1926-27 has been estimated at 63,000,000 poods, of which 31,000,000 will be for the Southern region supplied directly from Baku and Grozny; other sections, supplied from the Volga storage tanks will require about 40,000,000 poods, including 1,000,000 poods of ligroine for tractors.

In pre-war times kerosene comprised about half of all Russian oil exports. At present exports of fuel oil and gasoline are larger, but exports of kerosene are increasing; they came to 3,648,000 poods in 1921-22, from which they have increased to 23,862,000 in 1924-25 and 18,900,000 in 1925-26. Exports during the first quarter of the current fiscal year came to 7,100,000 poods; for the entire year they are estimated at 20,000,000, large consignments to go to Persia, China, Mongolia, Manchuria and Baltic countries. This estimate may be increased on account of European interest in Russian kerosene for cracking.

Gasoline

Sales of gasoline in 1923-24 came to 1,850,000 poods, from which they rose to 2,725,000 poods in the following year and 3,900,000 in 1925-26. It is estimated that they will come to 3,400,000 in 1926-27. Besides the automobile trade, gasoline is used in aviation, the rubber and coal industries, by tractors and other consumers, so that the total domestic demand for 1926-27 has been estimated at 4,600,000 poods.

Russian gasoline is in strong demand on the world market, as it is of good quality, and exports have risen from 2,600,000 poods in 1921-22 to 16,848,000 in 1924-25 and 25,200,000 in 1925-26. The last figure was limited by the production capacity of the Russian refineries. It is claimed that exportation for 1926-27 will not be less than 33,000,000 poods, including ligroine; during the first quarter 7,600,000 poods were exported.

Lubricating Oils

Sales of lubricating oils and miscellaneous oil products such as oil for soap came to 2,834,000 poods in 1922-23; in 1925-26 sales of lubricating oil alone were 6,100,000 poods, and they are estimated at 9,925,000 for the current year. The soviet never had a large exportation of lubricants, as the Russian plants can produce only the basic kinds, while foreign markets demand a considerable assortment of high grade. In addition, exports are apt to be unprofitable on account of complicated methods of packing, delivery and storage. It is simpler to export basic kinds of oil than to transform them into special kinds, and therefore in the majority of cases Russian lubricating oils are sold as crude and semi-finished products. In 1921-22 experts of lubricating oils came to 2,145,000 poods and those of solar oils to 93,000 poods. These figures rose to 8,000,000 poods and 3,100,000 poods, respectively, in 1925-26, and total sales for 1926-27 are estimated to reach 11,100,000 poods, made up of 7,000,000 poods of machine oil, 3,000,000 of solar oil, 500,000 of cylinder oil, 300,000 of spindle oil and 300,000 of automobile oil.

Lubricating Grease

Sales of lubricating grease, used in Russia exclusively as axle grease for all kinds of vehicles from locomotives to carts, have risen from 3,700,000 poods in 1922-23 to 9,200,000 in 1925-26, and have been estimated at 11,500,000 for the present year. In this commodity also sales are limited not by the demand but by the productive capacity of the industry and also by its inability to supply the goods in small containers required by the market. Exports are insignificant, and mostly on isolated orders; they are estimated at 500.000 poods for the current year.

The development of the oil industry needs the investment of large amounts of capital. The strained condition of the Russian treasury does not permit sufficient appropriations for this purpose, and an increase in prices appears to be the only feasible method to accumulate the capital required for expansion. Export prices can not be increased, owing to acute competition, in fact, those of gasoline and fuel oils will probably have to be reduced; therefore, only prices on domestic markets may be raised. It is claimed that such increases, if moderate, are justified and will not react unfavorably.

The Russian fiscal year is from October 1 to September 30.

Life of Wildcat Crew in Southernmost Mexico

(Continued from page 32)

a child descend from its mother's breast, light a cigarette and settle down on the floor to enjoy an after-dinner smoke.

Little Liquor Drinking

Contrary to the average person's idea of the tropics, there is little drinking of intoxicating liquors. Alcohol and good health, which is essential to a prolonged stay in the tropics, are never boon companions. Those who are foolish enough to attempt it soon learn that to indulge excessively in any health destroying habits costs a bigger penalty here than anyone can afford to pay. On the other hand, the observance of a few ordinary health rules, the importance of which is impressed upon each boll weevil on his arrival, will pay unusually big dividends in health and is possibly the biggest factor contributing to a pleasant sojourn in the Isthmus. Observance of these facts may explain the general contentment that reigns among roughnecks of El Aguila's camps.

The temperature for most of the year is naturally high, the average being about 100 degrees Fahrenheit, and at times the heat is intense. The month of May is the one particularly hot month, the peak being reached when the thermometer reaches 105 degrees Fahrenheit. The most noticeable effect of this is the feeling that soon comes over one that none of the cares and duties of today are so important that some of them can not wait until tomorrow. In truth, this is the "Land of Manana." In Wortham we laughed at tendencies of "Manana." When we come to Tonola, we become its disciple.

It is a far cry from Goose Creek to Puerto Mexico, and after seven days and nights of traveling the average roughneck wonders upon his arrival why he ever left God's country and the good old Estados Unidos. But he soon picks up the language and begins to see the real charm of the country and settles down to a languid tropical life. But there is another aspect of the tropics when one is not looking through rose colored glasses and the urge to pack the old trunk is difficult to resist. Eventually they all strike the suitcase sand and heed the call of their native Gulf Coast. As they board the "kalamazoo" for the last time, their good-bye words are usually the same —"Good-bye, boys, goin' back and stand on the south side of the Rice Hotel and let the cool norther blow by."

As to your offer to send The Oil Weekly to us down here, it is unnecessary, as the company subscribes to it for us. However, I am having Bamma subscribe to it for me personally so I shall be sure not to miss any copies. We all enjoy it very much and read every advertisement in it, as well as the articles on different fields.

Well, old Hot Shot, I'll not trouble you any longer as the only motif of this carta is to try to tell you how the poor, benighted roughneck ekes out a living in the tropics.

Regards to you, your loved ones and any of my friends you might happen to see.

JAMES L. BATES,
Apt. 86,
Puerto Mexico,
Vera Cruz, Mexico.

Midwest Buys Acreage

Craig, Colo. — Midwest Refining Company is reported to have acquired all of the acreage on Bell Rock Dome, 10 miles from this city north of the Yampa river, in Moffat County, and also the controlling holdings on Deception Creek structure, north of the town of Maybell which is said to be one of the largest structures in northwestern Colorado. Acreage was acquired under a drilling agreement paying a bonus.

Four Counties Share in Area Opened By Ranger Lime Producer

Well in northwestern Eastland County now flowing 400 barrels a day—second test being made

By H. H. KING
Staff Representative

RANGER, Texas. — The adjoining corners of four counties share in the potential oil producing leases surrounding the most recent Ranger lime pay strike made by H. H. Adams and the Moody Corporation on the J. C. Dyer farm in northwestern Eastland County with a flush output of 900 barrels of 39 degree gravity oil daily at 3849-83 feet. This well has been on production nearly one month, and is making 400 barrels daily, while a second well for the area is preparing to drill in with a heavy flow of gas at 3802-05 feet. The Dyer discovery well is more than 10 miles from the nearest deep production of any consequence, and is rated as one of the most important strikes made in Eastland County in several years.

The second test of the Ranger lime pay in the Dyer pool is being made by the Transcontinental Oil Company's R. F. Weddington 1, located on the east line of section 2054, and about 2500 feet northwest of the discovery oil well. The top of the Ranger was logged in the Weddington test at 3798 feet, with a surface elevation of 1499 feet, and gas pay at 3802-05 feet blew the tools from the hole and damaged the derrick during the past week, with an estimated flow of 20,000,000 cubic feet of gas. Repairs were being made to the derrick early this week in preparation to drilling through the heavy gas to the oil horizon. A direct offset to the east is being started by H. H. Adams and the Moody Corporation with Dyer 2.

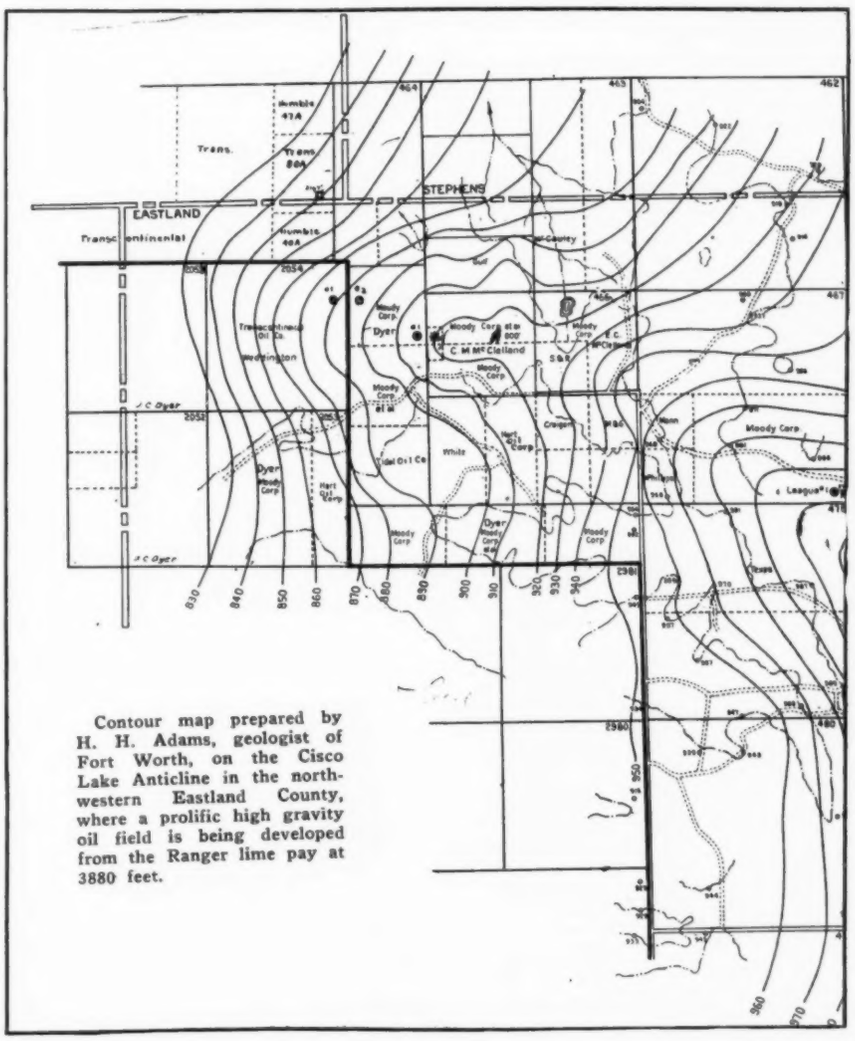
Interest in the northwestern part of Eastland County was attracted in January, 1925, when Adams & Henry Riley's C. M. McClelland wildcat test developed an eight million cubic foot gasser at 3600 feet, and began making a light spray the following March, when deepened. The well was completed in May, 1925, at 3674 feet, making 10 million cubic feet of wet gas, and has since been idle, except for gas sales to The Texas Company. This well drips about 100 gallons of gasoline daily, and is now rated for 4,000,000 cubic feet of gas daily, with a rock pressure of 1200 pounds. A steel derrick is to be erected over this gas well to deepen several hundred feet to the Ranger pay on the strength of the performance of the Dyer 1, which is a direct offset to the west.

The production from the Dyer well is being purchased by Humble, and handled through a 20-mile two-inch line. Humble's West Texas trunk line passes within a short distance of the pool, but connections will not be made, since the West Texas oil is of a lower grade. Transcontinental Oil Company plans to build a line into the field following the completion of an oil producer on the Weddington farm.

The natural gasoline yield of the gas produced in the Dyer pool averages about one and one-fourth gallons per 1000 cubic feet, and a high pressure absorption plant is being erected by Adams and the Moody Corporation. A new company will be formed to handle the natural gasoline business. Hirt & MacDermott, Inc., of Fort Worth, have been awarded the contract to erect a 3000-gallon capacity plant on the Dyer farm, while M. S. Eldred will be in charge of the construction and operation.

Deeper drilling on the Empire Gas & Fuel Company's wildcat test on the Johnson land, located in southwestern Callahan County, resulted in a spray of oil estimated at 30 barrels daily late last week at 4145 feet, with a flow of gas rated above 10 million cubic feet. This well is located in the northeast corner of section 146, G. H. & H. Ry. survey, and is the only deep production in the county.

Douglas, Wyo.—The first deep test in the Brenning Basin field, Converse County, has a standard rig up on southeast northwest section 9-31-73 where A. A. Tylee and associates are to start operations immediately. Test is to start with a 20-inch hole and is intended for the Lakota sand which has never been penetrated in that district. Sand outcrops a few miles from the field and is heavily saturated with oil.



Contour map prepared by H. H. Adams, geologist of Fort Worth, on the Cisco Lake Anticline in the northwestern Eastland County, where a prolific high gravity oil field is being developed from the Ranger lime pay at 3880 feet.

Boggy Creek Well Gets Salt Water Again

Houston.—Humble Oil & Refining Company's Elliott-Clark 1, Boggy Creek discovery well, northeastern Cherokee County, made 42 barrels pipe line oil per hour for a short time Sunday and then began making a rate of 10,000 barrels daily, 85 per cent salt water. The well was shut in Monday morning for the purpose of re-cementing casing. Failure of cement to hold is believed to have caused the water to break in.

Elliott-Clark 1 was worked over the last time after going dead from sanding and failure of casing to hold more than two weeks ago when it was opened for a test. Total depth of the hole is now 3840 feet, and will be plugged back to 3800 feet for the next test.

Humble's Southern Pine A-2, near Posey, Anderson County, is showing oil at 4446 feet. Six and five-eighths-inch casing is being set in lime rock 4420-24 feet, and the hole is being plugged on the bottom. Location has been made by Humble for Southern Pine B-1, 305 feet from the northeast line and 1250 feet from the northwest line of the H. Main Survey, northeastern Anderson County.

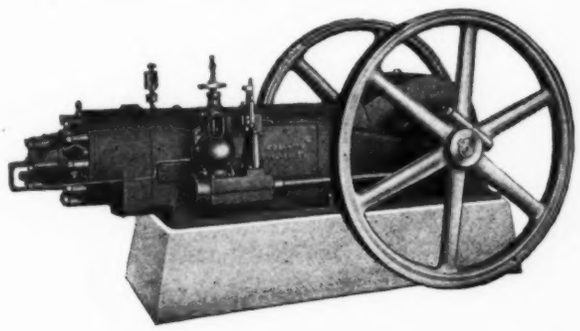
J. S. Cosden et al have made location for the Douglas 1 wildcat nine miles west of Palestine, northern Anderson County. The Texas Company's Houston County Coal and Manufacturing Company 1, located 1½ miles south of Lovelady, Houston County, was spudded early this week.

WEST TEXAS PRODUCTION

	Producing Wells	Daily Average
CRANE COUNTY		
Church & Fields—		
Simms & Atlantic	11	8,245
Eastland Oil Co. & Collett-O'Keefe	4	6,740
Humble O. & R. Company	8	6,735
Tidal Oil Co.-Turman-Maxwell	8	5,050
Gulf Production Company	7	2,375
Magnolia Petroleum Company	17	1,375
Independent Oil & Gas Company	2	1,215
Geo. Church & Bert Weekly	1	1,085
Carl Cromwell & Frank Pickrell	1	1,025
Geo. Church & Fields	3	810
Prairie Oil & Gas Company	7	585
The Texas Company	1	380
Stidham & Thrasher	1	15
Totals	71	35,635
Gulf-McElroy—		
Gulf Production Company	22	11,090
Marland-Hughes—		
Marland Oil Company	16	1,005
The Texas Company	10	320
McMan Oil & Gas Company	2	90
Independent Oil & Gas Company	1	10
Totals	29	1,425
Totals for Crane County	122	48,150
UPTON COUNTY		
Roxana Petroleum Corporation	30	3,280
T. & P. Coal & Oil Company	11	3,575
Marland Oil Company	79	3,185
Dixie Oil Company	29	3,030
Gulf Production Company	13	2,180
Independent Oil & Gas Company	25	1,220
Prairie Oil & Gas Company	5	1,010
The Texas Company	16	360
Amerada Petroleum Corporation	5	355
Sun Oil Company	10	325
Humble Oil & Refining Co.	7	245
Wentz Oil Corporation	3	115
Simms Oil Company	3	105
Republic Production Co. & Marland	5	90
McMan Oil & Gas Company	1	45
Atlantic Oil Prod. Co.	1	35
Snowden & McSweeney	1	300
Texon Oil & Land Company	1	25
Totals	245	19,480
PECOS COUNTY		
Mid-Kansas & Transcontinental	7	*6,885
Texon Oil & Land Company	1	5
Totals	8	6,890
REAGAN COUNTY		
Big Lake Oil Company	100	18,455
Texon Oil & Land Company	71	7,150
Totals	171	25,605
WINKLER COUNTY		
Southern Crude Oil Purchasing Co.	3	*800
Gulf Production Company	1	*330
Independent Oil & Gas Company	1	65
Totals	5	1,195
JONES COUNTY		
Phillips Petroleum Company	8	1,020
Marland Oil Company	3	515
Mid-West Exploration Company	4	2 5
Atlantic Oil Producing Co. et al	1	20
Totals	16	1,770
MITCHELL COUNTY		
The California Company	79	2,575
Magnolia Petroleum Company	20	665
Atlantic Oil Producing Co.	8	360
East.and Oil Company et al	9	325
Tidal Oil Company	2	20
Fred Carey et al	1.	15
Totals	119	3,960
HOWARD COUNTY		
Marland Oil Company	32	1,535
Magnolia Petroleum Company	24	825
Pure Oil Company	2	295
Reeves & Apperman et al	2	190
Bristow & Merrick	3	160
Lockhart & Company et al	7	120
Humble Oil & Refining Company	2	50
Tidal Oil Company	2	50
F-H-E Oil Company	1	25
Gulf Production Company	2	20
Dixie Oil Company	1	15
Mid-West Exploration Co.	1	20
Comet Petroleum Company	1	15
Totals	80	3,320
CROCKETT COUNTY		
Humble & Marland Oil Company	9	405
J. K. Hughes Development Company	4	250
Republic Production Company	2	240
P. H. Williams et al	1	240
Carl Cromwell	4	150
Gulf Production Company	6	95
Humble Oil & Refining Co.	2	60
Roxana Petroleum Corporation	1	20
Totals	29	1,460
GLASSCOCK COUNTY		
Marland & Texon Oil & Land Co.	1	35
ECTOR COUNTY		
J. S. Cosden et al	1	20
SCURRY COUNTY		
Northwest Company	4	20
LOVING COUNTY		
Lockhart & Company	1	25
GARZA COUNTY		
Emerald Oil Company	1	2
Totals past week all fields	803	111,932
Totals previous week	801	108,145

*Production pinched.

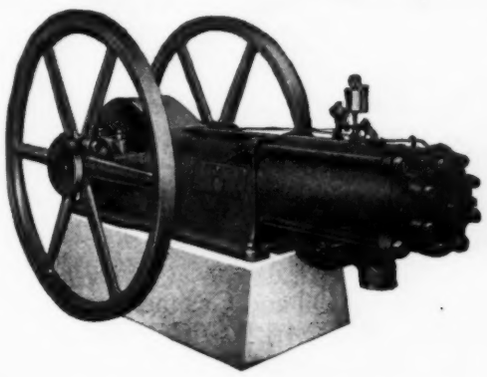
Franklin Pumping Engines



Oil Pumping Engine

Here is the power plant that has the fewest possible number of parts to require attention, adjustment, repairs or replacement. After you've finished drilling, move in one of the Franklin Oil Pumping Engines. Any user will tell you that it can be operated at an extremely low fuel, water and lubricating cost.

These pumpers come in 30, 40, 50 and 75 Horse Power. Can be equipped with Reverse Motor and one way clutch.



Gas Pumping Engine

After you've finished making hole, move your Drilling Engine to the next job and hook up a Franklin Gas Pumping Engine. Interchangeable on the same block without shifting a single bolt. These engines can show you a power, speed and flexibility almost unbelievable.

Say good-bye to the old "biler" and learn what real economy and freedom from trouble is like. Ask any Franklin user!

FRANKLIN VALVELESS ENGINE CO.
FRANKLIN, PENNA.

Distributed by

Oil Well Supply Co. ***through its 100 branches***

FRANKLIN
VALVELESS ENGINES

The Truth Abou

SINCE we have revealed the true condition of MILL SECONDS and the method of how it is being marketed to the Oil and Gas Industry, in the April 14th issue of the Mid-Continent Purchaser, the May 5th issue of The Oil and Gas Journal and the May 6th issue of the Oil Weekly, we find that 90% of the Oil and Gas Fraternity did not realize that MILL SECONDS consists of such an inferior grade.

A great many Oil and Gas men, representing every Branch of the Industry, have carefully inspected the car of MILL SECONDS in our Tulsa Yard which we have purchased and placed there for the purpose of acquainting all interested parties as to the true condition of MILL SECONDS.

The majority of those who have examined this car of SECONDS admitted they were not aware that MILL SECONDS consists of such a small per cent of usable pipe.

Most of them conceded the fact that unless a dealer would tell the truth of the actual condition of MILL SECONDS at the time of the sale, the inspector would hardly know what to look for, as when brokers and dealers get through preparing it for the market, with the Mills allowing to go out without stencil, makes it very difficult for the inspector to find all defects.

For instance, a great deal of MILL SECONDS consists of BURNED METAL which requires an expert to determine shortly after the pipe gets weather rusted. With regard to DEFECTIVE WELDS, about the only thing the average inspector would find would be welds which are noticeably open and the same would apply to heavy blisters, providing they would be on top. However, a great deal of same is on the inside. When the dealers get through "fixing" the noticeable defects and put on collars and protectors it makes the pipe look more merchantable and helps pass inspection.

The Dealers and Brokers buy MILL SECONDS as it runs for an approximate price of from $30.00 to $40.00 per ton, based upon sizes of pipe, which represents about double the price of what scrap iron is worth at the Mill, selling for from $75.00 to $100.00 per ton. Allowing cost of freight and handling leaves a net profit of approximately fifty to one hundred per cent. The Mills who sell MILL SECONDS grasp the opportunity to save about fifteen dollars per ton over scrap iron prices, apparently with no regard to protect the trade.

Pipe over three inches in diameter ranges about three to four weights to the size. When you buy MILL SECONDS, you get all weights of pipe under the assumption of its being slightly underweight and if you will investigate, you will find some of it is too light to stand, not only eight thread but any kind of thread—yet it is all equipped with eight thread and often represented as first class pipe, only underweight. By reason of mixed weights and the dealer buying same by the ton and selling on a per foot basis, reduces his cost to where his profits are enormous, while you are paying practically as much for defective pipe as you can buy number one used pipe, or light weight number one Mill shipment.

We all know the Mills condemn this grade of pipe for no other reason than being defective on account of BURNED METAL, BLISTERED PIPE, BAD WELDS, and other defects. If any part of it is good enough to be used for the purpose for which it is being sold, it would be no more than fair that the Mills take out the scrap grade material, stenciling the remainder as to what it may be truthfully used for, in that way closing the avenue of misrepresentation rather than allowing it to go out without a stencil or any other indication as to its true condition, as well as the name of the Manufacturer, as is being done now especially in view of the fact that one of

out Mill Seconds

the large Mills who sells MILL SECONDS, in their letter to us, replying to ours of January 28th, stated as follows:

> *"You are going to find it very difficult to have a stencil put on pipe such as described in your letter, that will not be easily eliminated should an unscrupulous dealer desire to do so."*

Brokers and Dealers who sell MILL SECONDS are not anxious to have it stenciled because it would indicate the truthful defects which would interfere with their making enormous profits as, undoubtedly, the customer would expect to buy it at a price which an inferior grade of material is worth.

Since we have published the truth about MILL SECONDS, we have had a number of dealers try to defend themselves on the theory that, while an enormous amount of MILL SECONDS is being sold in the Mid-Continent Field, not all of it is sold for lines. They state a great portion is used in the manufacture of tubular rigs. Upon due investigation, we find there is a great deal of MILL SECONDS sold to Rig Manufacturers. Think what it means to find BURNED or other defective pipe in a rig you are depending upon to carry the heavy duty load. Think of the lives of men you are endangering and financial loss due to collapse of the rig which is liable to happen on account of the inferior grade of material.

REMEMBER, when you build Gasoline Plants, Lines or Rigs, the cost of construction is just as great or greater when using MILL SECONDS as it is when you use No. 1 pipe, freight and erection cost being the same. If you will stop to consider the SAFETY and SALVAGE VALUE on No. 1 pipe, you will find you are losing instead of saving by using MILL SECONDS.

You, no doubt, will be interested to know the Taubman Supply Corporation is the first to sound the alarm as to the true condition of MILL SECONDS and method of its sale, as the question of MILL SECONDS is no secret to some of the other Supply Men who have also never handled MILL SECONDS. Some of the reasons why others have not started this Campaign are:

FIRST: The expense and time required in making careful investigation.

SECOND: The cost of publications in which our articles appear.

THIRD: The greatest reason of all—whether or not some of the other Supply Houses want to antagonize the Mills who market Mill Seconds.

The Taubman Supply Corporation was built on the merits of a Square Deal to every Customer and does not hesitate to tell the truth.

Ever since the inception of our Organization, we have done our utmost to promote fair dealing in the Second Hand Pipe Industry and now that we are handling new pipe, we are interested to eliminate whatever bad practices we find.

General Offices: Midco Building
TULSA, OKLAHOMA

District Sales Offices: 1424 Niels Esperson Bldg., Houston; 403 Magnolia Bldg., Dallas, Texas

Branches
EL DORADO, KANSAS SEMINOLE, OKLAHOMA PHILLIPS PANHANDLE, TEXAS

United States Daily Average Production

Figures below are taken from the complete revised estimates of the AMERICAN PETROLEUM INSTITUTE except for the current week, which are advance estimates issued by the A. P. I. and are subject to revision;

Month—	Oklahoma	Kansas	Texas (Outside Gulf Coast)	Gulf Coast	North Louisiana	Ark.	Eastern States	Rocky Mountain	California	United States Ave.	Gross
January 1926	449,370	100,130	260,180	90,290	43,990	181,190	101,000	102,300	621,300	1,946,980	60,356,380
February	450,037	101,937	245,989	91,550	45,090	169,676	99,000	98,412	605,250	1,909,637	53,469,836
March	454,762	103,300	260,262	92,712	48,787	164,312	97,625	102,325	604,500	1,929,562	59,816,422
April	467,175	101,825	263,612	88,812	50,562	169,824	100,875	106,675	600,000	1,947,387	58,421,610
May	463,750	105,690	277,700	94,550	58,150	175,430	105,700	112,300	602,720	1,995,990	61,875,690
June	456,450	107,637	302,187	89,912	60,412	167,887	106,250	112,925	606,925	2,013,187	60,395,610
July	456,920	110,320	336,600	114,760	57,460	161,870	104,700	108,520	613,940	2,062,470	63,936,570
August	465,137	111,600	381,550	161,237	56,787	157,375	108,350	110,737	609,725	2,162,662	67,042,522
September	465,387	113,037	402,212	175,512	56,575	154,037	110,125	105,825	598,100	2,180,862	65,425,860
October	497,120	114,720	439,190	170,350	58,200	149,810	109,500	99,060	611,600	2,259,850	70,055,350
November	551,225	115,425	475,987	176,425	56,575	144,100	111,125	93,537	641,325	2,365,475	70,964,250
December	561,012	118,950	483,450	181,263	55,137	139,250	110,375	87,650	659,925	2,396,112	71,279,472
January 1927 . .	591,570	117,490	460,910	176,330	53,030	132,648	108,100	83,910	655,660	2,385,650	73,955,150
February.....	683,775	116,200	479,175	154,975	52,850	128,362	107,250	85,237	642,775	2,455,612	69,157,136
March.....	707,187	115,612	475,375	154,262	51,450	124,662	104,500	87,200	644,350	2,462,625	76,341,375
April.....	723,820	115,510	476,920	155,420	50,670	114,860	107,500	89,130	643,520	2,477,350	74,320,500
May.....	716,175	114,675	488,125	151,375	47,465	113,525	113,625	89,625	633,225	2,491,975	77,374,910
June 4	751,500	113,750	494,200	150,550	47,500	113,000	114,000	86,350	636,400	2,505,300	.....
June 11	750,700	112,750	484,700	149,350	48,350	111,750	112,500	84,550	643,800	2,498,450	.....
Increase	.....	.....	.....	.....	850	.....	.....	.....	7,400	.....	.....
Decrease	800	1,000	9,500	1,200	.....	1,250	1,500	1,850	.....	6,850	.....

TEXAS

(Outside Gulf Coast)

PANHANDLE DISTRICT

	June 11	June 4
Hutchinson County	102,700	112,600
Gray County	12,050	12,800
Carson County	12,300	12,800
Wheeler County	2,450	2,200
Others	50	50
Totals	129,550	140,450

NORTH TEXAS

Burkburnett	12,950	12,500
Electra	13,300	13,050
Iowa Park-KMA	3,400	3,500
Wilbarger	13,250	13,000
Archer County	30,300	30,000
Clay County (Petrolia)	750	750
Baylor County	100	100
Montague and Cooke Cos.	14,050	14,550
Totals	88,100	87,450

WEST CENTRAL TEXAS

Stephens County	8,900	8,800
Eastland-Desdemona	7,200	7,050
Brown County	29,050	28,800
Coleman County	1,200	1,200
Callahan County	3,750	3,900
Shackelford County	11,300	11,450
Young County	8,400	8,500
Throckmorton County	2,950	3,000
Jack County	500	500
Palo Pinto County	1,600	1,700
Jones County	2,300	2,250
Mitchell-Scurry Cos.	3,700	3,650
Howard County	2,750	2,700
Reagan County	26,250	26,400
Crane-Upton Counties	70,850	65,650
Crockett County	1,200	1,200
Pecos County	9,750	13,100
Winkler County	1,050	800
Others	2,950	3,500
Totals	195,650	193,400

EAST CENTRAL TEXAS

Mexia	10,850	11,000
Currie	600	600
Richland	1,050	900
Wortham	3,450	3,000
Corsicana-Powell	17,600	19,000
Nigger Creek	3,950	4,000
Totals	37,500	38,500

SOUTHWEST TEXAS

Luling	16,300	16,450
Lytton Springs	2,000	2,100
Somerset	1,200	1,200
Laredo District	13,750	14,000
Piedras Pintas	50	50
Others	600	600
Totals	33,900	34,400
T'ls Tex. (Outside Gulf Coast)	484,700	494,200

TEXAS GULF COAST

West Columbia	9,850	9,950
Damon Mound	950	950
Big Creek	4,200	4,175
Boling	2,050	2,050
Blue Ridge	3,050	2,500
Pierce Junction	7,750	8,850
Humble	3,600	3,600
Goose Creek	8,350	8,550
South Liberty	3,000	3,100
Hull	18,050	17,550
Saratoga	1,250	1,000
Batson	1,350	1,500
Sour Lake	4,500	4,400
Spindle Top	56,050	57,900
Orange County	5,600	5,500
Others	4,400	4,600
Totals	134,000	136,100

OKLAHOMA

North Braman	4,850	4,950
South Braman	3,700	3,350
Blackwell	3,750	3,800
Hubbard	6,600	7,750
Thomas	5,100	5,400
Tonkawa	21,650	21,950
Garber	14,250	14,300
Burbank	45,700	45,550
Osage (outside Burbank)	32,350	32,950
Watchorn	2,400	2,450
Cushing	21,450	21,500
Yale Jennings	11,550	11,650
Davenport	3,300	3,350
Bristow Slick	26,800	27,150
North Okmulgee	16,950	17,100
Lyons Deaner	5,400	5,500
Stroud	1,050	1,400
Cromwell	13,000	12,650
Papoose	7,150	7,100
Wewoka	18,750	19,050
Duncan District	7,000	7,050
Earlsboro	64,050	63,750
Graham	7,850	7,900
Fox	1,850	1,850
Healdton	14,900	14,900
Seminole	298,300	296,750
Hewitt	10,000	10,000
Scholem Alechem	16,850	16,700
Others	64,150	63,700
Totals	750,700	751,500

CALIFORNIA

Seal Beach	68,000	54,000
Santa Fe Springs	41,000	41,000
Long Beach	95,000	96,000
Huntington Beach	76,500	76,000
Torrance	23,500	23,500
Dominguez	17,000	17,500
Rosecrans	10,000	10,500
Inglewood	35,000	36,000
Midway-Sunset	89,500	91,000
Ventura Avenue	37,300	37,700
Others	151,000	153,200
Totals	643,800	636,400

KANSAS

Florence-Covert	1,800	1,800
Peabody-Elbing	3,750	3,750
Eldorado-Towanda	13,700	13,700
Augusta-Fox Bush	4,400	3,750
Rainbow Bend	2,350	2,400
Russell	2,950	2,950
Greenwood County	37,000	37,500
Churchill	18,400	18,550
Others	28,400	28,700
Totals	112,750	113,750

ARKANSAS

	June 11	June 4
El Dorado	6,250	6,300
Smackover Light	11,200	11,300
Smackover Heavy	87,500	88,600
Stephens	1,400	1,400
Nevada	1,450	1,450
Lisbon	3,800	3,850
Others	150	100
Totals	111,750	113,000

NORTH LOUISIANA

Homer	5,100	5,150
Haynesville	7,800	7,700
Caddo Light	9,700	10,050
Caddo Heavy	4,850	4,500
De Soto-Red River	3,850	3,900
Elm Grove	700	700
Bellevue	1,350	1,400
Cotton Valley	5,750	5,650
Urania	8,600	8,050
Pleasant Hill	650	400
Totals	48,350	47,500

LOUISIANA GULF COAST

Vinton	5,050	5,250
Lockport	7,000	6,000
Evangeline	1,000	1,000
Edgerly	1,250	700
Others	1,050	1,550
Totals	15,350	14,500
Totals, Gulf Coast	149,350	150,550

MOUNTAIN STATES

WYOMING

Salt Creek	42,950	45,600
Grass Creek	2,700	2,550
Elk Basin	900	850
Big Muddy	2,700	2,750
Lost Soldier	3,350	1,800
Rock River	2,850	2,800
Lance Creek	450	500
Teapot Dome	800	1,300
Others	4,050	3,800
Totals	60,750	61,950

MONTANA

Cat Creek	2,200	2,300
Sunburst	11,200	11,200
Others	200	200
Totals	13,600	13,700

COLORADO

Moffats (Craig)	1,700	1,750
Fort Collins	3,200	2,900
Florence	1,000	900
Others	1,500	1,600
Totals	7,400	7,150

NEW MEXICO

Table Mesa	200	600
Artesia	1,700	750
Hogback	750	1,700
Rattlesnake	150	500
Totals	2,800	3,550
Totals Mountain States	84,550	86,350

EASTERN STATES

(Including Ill., Ind., Ohio, W. Va., Pa., Ky., and N. Y.)..	112,500	114,000

PRODUCTION SUMMARY

East of Rockies	1,770,100	1,770,900
United States	2,498,450	2,507,300

Dreadnaught Products

Patent applied for.

Yount Pumping Counter-Weight

THE YOUNT Pumping Counter-Weight balances the load, and makes the pumping stroke noticeably smooth and even. Greatly prolongs the life of equipment.

Mounted on rollers, adjustable, convenient. Easily rolled to the center, out of the way, when pulling rods or tubing. May be quickly clamped in position at any desired point on the beam. Weights range from 3450 to 5650 pounds. Built for all walking-beams.

Send for Booklet.

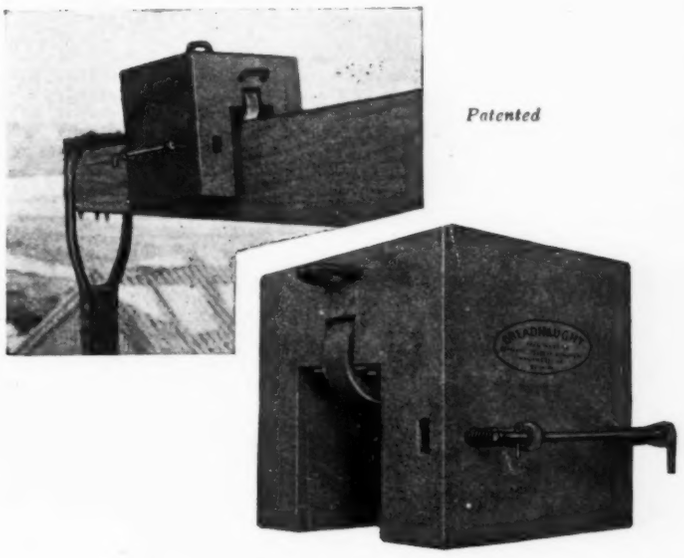
Yount Ocillating Stirrup Bearing

DREADNAUGHT
MFD. BY
BEAUMONT IRON WORKS CO.
BEAUMONT, TEXAS
U. S. A.

"The Label of Quality"

THIS YOUNT Oscillating Stirrup Bearing absolutely eliminates wear caused by misalignment of walking beam or crank, and greatly facilitates removal of pitman from wrist pin. Double bearing, electric steel, ample lubrication. Real economy on any well.

Send for Booklet.



Patented

Beaumont Iron Works Co.

Beaumont, Texas, U. S. A.

Distributed by the Frick-Reid Supply Company, General Offices, Tulsa, Oklahoma

WE ENDORSE THE STANDARDIZATION PROGRAM OF THE AMERICAN PETROLEUM INSTITUTE

CRUDE OIL PRICE QUOTATIONS

CURRENT POSTINGS

EASTERN STATES

	June 15 1927
New York Transit	$2.90
Bradford District	2.90
National Transit	2.80
Southwest	2.80
Eureka	2.75
Buckeye	2.60
Macksburg	2.80
Gaines	2.60
Somerset	1.70
Cabell	1.60
Ragland	.95
Corning, 35-cent grade	1.45
Corning, 25-cent grade	1.35
Keister	1.30

CENTRAL STATES

Illinois	1.60
Indiana	1.48
Lima	1.71
Plymouth	1.33
Princeton	1.60
Waterloo	1.18
Wooster	1.77

WESTERN KENTUCKY

Posted by Stoll Refining Company for crude from Allen, Warren, Franklin, Davies, Barren, All grades 1.50

MID-CONTINENT

Prairie, Sinclair, Gulf, Texas

28 to 28.9 gravity	1.12
29 to 29.9 gravity	1.14
30 to 30.9 gravity	1.16
31 to 31.9 gravity	1.18
32 to 32.9 gravity	1.20
33 to 33.9 gravity	1.22
34 to 34.9 gravity	1.24
35 to 35.9 gravity	1.26
36 to 36.9 gravity	1.28
37 to 37.9 gravity	1.30
38 to 38.9 gravity	1.32
39 to 39.9 gravity	1.34
40 to 40.9 gravity	1.36
41 to 41.9 gravity	1.38
42 to 42.9 gravity	1.40
43 to 43.9 gravity	1.42
44 to 44.9 gravity	1.44
45 to 45.9 gravity	1.46
46 to 46.9 gravity	1.48
47 to 47.9 gravity	1.50
48 to 48.9 gravity	1.52
49 to 49.9 gravity	1.54
50 to 50.9 gravity	1.56
51 to 51.9 gravity	1.58
52 and above	1.60

Magnolia Petroleum Company

	June 15 1927
Below 33	$1.05
33 to 33.9 gravity	1.07
34 to 34.9 gravity	1.09
35 to 35.9 gravity	1.11
36 to 36.9 gravity	1.13
37 to 37.9 gravity	1.15
38 to 38.9 gravity	1.17
39 to 39.9 gravity	1.19
40 to 40.9 gravity	1.21
41 to 41.9 gravity	1.23
42 to 42.9 gravity	1.25
43 to 43.9 gravity	1.27
44 to 44.9 gravity	1.29
45 to 45.9 gravity	1.31
46 to 46.9 gravity	1.33
47 to 47.9 gravity	1.35
48 to 48.9 gravity	1.37
49 to 49.9 gravity	1.39
50 to 50.9 gravity	1.41
51 to 51.9 gravity	1.43
52 and above	1.45

NORTH AND CENTRAL TEXAS

Ranger, North Texas, Mexia, Powell, Richland, Wortham, Lytton Springs, Currie Moran and Nocona Crude

Humble O. & R. Co.* and Texas Co.

	June 15 1927
28 to 28.9 gravity	1.12
29 to 29.9 gravity	1.14
30 to 30.9 gravity	1.16
31 to 31.9 gravity	1.18
32 to 32.0 gravity	1.20
33 to 33.9 gravity	1.22
34 to 34.9 gravity	1.24
35 to 35.9 gravity	1.26
36 to 36.9 gravity	1.28
37 to 37.9 gravity	1.30
38 to 38.9 gravity	1.32
39 to 39.9 gravity	1.34
40 to 40.9 gravity	1.36
41 to 41.9 gravity	1.38
42 to 42.9 gravity	1.40
43 to 43.9 gravity	1.42
44 to 44.9 gravity	1.44
45 to 45.9 gravity	1.46
46 to 46.9 gravity	1.48
47 to 47.9 gravity	1.50
48 to 48.9 gravity	1.52
49 to 49.9 gravity	1.54
50 to 50.9 gravity	1.56
51 to 51.9 gravity	1.58
52 and above	1.60

Corsicana Heavy, $1.00 per barrel, posted by Magnolia.

*Until further notice, Ranger, North Texas, Mexia, Powell, Richland, Wortham, Lytton Springs, Currie, Moran and Nocona crudes purchased at agravity lower than 28 degrees will be paid for at the posted price for 28 degrees gravity.

SOUTH TEXAS

Mirando 1.00

SOMERSET

Grayburg

Below 33 gravity	$1.05
33 to 33.9 gravity	1.07
34 to 34.9 gravity	1.09
35 to 35.9 gravity	1.11
36 to 36.9 gravity	1.13
37 to 37.9 gravity	1.15
38 and above	1.17

GULF COAST

Grade "A" all companies	1.20
Gulf Coast Light Oil, Below 25	1.15
25 to 25.9 gravity	1.17
26 to 26.9 gravity	1.19
27 to 27.9 gravity	1.21
28 to 28.9 gravity	1.23
29 to 29.9 gravity	1.25
30 to 30.9 gravity	1.27
31 to 31.9 gravity	1.29
32 to 32.9 gravity	1.31
33 to 33.9 gravity	1.33
34 to 34.9 gravity	1.35
35 to 35.9 gravity	1.37
36 to 36.9 gravity	1.39
37 to 37.9 gravity	1.41

(Continued on page 58)

CALIFORNIA CRUDE OIL PRICES AT THE WELL

Following are the current prices offered by Standard Oil Company for crude oil at the well: (Price per barrel of 42 gallons in fields indicated)

Gravity (degrees)	Signal Hill	Seal Beach	Huntington Beach	Inglewood	Olinda-Brea Canon	Athens-Rosecrans Dominguez	Torrance	Richfield	Whittier La Harbra	Montebello	Coyote Hills	Santa Fe Springs	Newhall McKittrick Kern River	Midway Sunset Elk Hills	Buena Vista Hills	Lost Hills	Coalinga	Wheeler Ridge
14-14-9	$ .85	$ .85	$ .85	$ .85	$ .85	$ ..	$ .85	$ .85	$ .85	$ .85	$ .85	$ ..	$ .75	$ .75	$ .75	$ .75	$ .75	$ .75
15-15-9	.85	.85	.85	.85	.85	..	.85	.85	.85	.85	.85	..	.75	.75	.75	.75	.75	.75
16-16-9	.85	.85	.85	.85	.85	..	.85	.85	.85	.85	.85	..	.75	.75	.75	.75	.75	.75
17-17-9	.85	.85	.85	.85	.85	..	.85	.85	.85	.85	.85	..	.75	.75	.75	.75	.75	.75
18-18-9	.85	.85	.85	.85	.85	..	.85	.85	.85	.85	.85	..	.75	.75	.75	.75	.75	.75
19-19-9	.85	.85	.85	.85	.85	..	.85	.85	.85	.85	.85	..	.75	.75	.75	.75	.75	.75
20-20-9	.85	.85	.85	.85	.85	..	.85	.85	.85	.85	.85	..	..	.77	.77	.77	.76	.76
21-21-9	.86	.86	.86	.86	.86	..	.86	.86	.85	.85	.86	.85	..	.79	.79	.79	.77	.77
22-22-9	.87	.87	.87	.87	.87	..	.87	.87	.85	.85	.87	.85	..	.81	.81	.81	.78	.78
23-23-9	.88	.88	.88	.88	.88	..	.88	.88	..	.85	.88	.85	..	.83	.83	.83	.79	.79
24-24-9	.89	.89	.89	.89	.89	.89	.89	.89	..	.85	.89	.85	..	.85	.85	.85	.80	.80
25-25-9	.90	.90	.90	.90	.90	.90	.90	.90	..	.86	.90	.86	..	.87	.87	.87	.81	.81
26-26-9	.92	.92	.92	.92	.92	.92	.92	.92	..	.87	.91	.87	..	.89	.89	.89	.83	.82
27-27-9	.94	.94	.94	.94	.94	.94	.94	.94	..	.88	.92	.88	..	.91	.91	.91	.85	.83
28-28-9	.96	.96	.96	.96	.96	.96	.96	.96	..	.89	.93	.89	..	.93	.93	.93	.87	..
29-29-9	.98	.98	.98	..	.98	.98	..	.98	..	.90	.94	.91	..	.96	.96	.96	.89	..
30-30-9	1.00	1.00	1.00	..	1.00	1.00	..	1.00	..	.91	.95	.93	..	.99	.99	.99	.91	..
31-31-9	1.03	1.03	1.03	..	..	1.03	..	..	..	..	..	.95	..	1.02	1.02	1.02	.93	..
32-32-9	1.06	1.06	1.06	..	..	1.06	..	..	..	..	..	.97	..	1.05	1.05	1.05	.95	..
33-33-9	..	..	..	..	..	1.09	..	..	..	..	..	.99	..	1.08	1.08	1.08	.97	..
34-34-9	..	..	..	..	..	1.12	..	..	..	..	..	1.01	..	..	..	1.11	.99	..
35-35-9	..	..	..	..	..	1.15	..	..	..	..	..	1.03	..	..	..	..	1.01	..
36-36-9	..	..	..	..	..	1.18	..	..	..	..	..	1.06	..	..	..	..	..	..
37-37-9	..	..	..	..	..	1.21	..	..	..	..	..	1.09	..	..	..	..	..	..
38-38-9	..	..	..	..	..	1.24	..	..	..	..	..	1.12	..	..	..	..	..	..
39-39-9	..	..	..	..	..	1.27	..	..	..	..	..	1.15	..	..	..	..	..	..
40-40-9	..	..	..	..	..	1.30	..	..	..	..	..	..	..	..	..	..	..	..
41-41-9	..	..	..	..	..	1.33	..	..	..	..	..	..	..	..	..	..	..	..
42-42-9	..	..	..	..	..	1.36	..	..	..	..	..	..	..	..	..	..	..	..

This Sign brings the motorist in ! and the Sinclair method of recommending Opaline brings him back !

Authorized Dealer

SINCLAIR OPALINE MOTOR OIL

REG. U. S. PAT. OFF.

Seals Power at every Degree of Wear

DISPLAY this sign outside your station—you tell your motoring world that you sell not just oil but CORRECT LUBRICATION! If you are an Authorized Opaline Dealer, you will ask a motorist to look at his speedometer and tell you how many miles his car has been driven, then you will consult the Sinclair Recommendation Index, and give him the right grade of Opaline to fit the degree of wear in his engine and seal its power!

That is the Sinclair Law of Lubrication in operation. That's the commonsense method of correct lubrication which brings the motorist in—and brings him back. Let us tell you how we co-operate with Authorized Opaline Dealers in building profitable business.

SINCLAIR REFINING COMPANY, INC.
Also Makers of Sinclair Gasoline and H-C Gasoline
45 NASSAU STREET, NEW YORK
Atlanta Boston Chicago Houston Kansas City

Entire contents copyrighted 1927 by Sinclair Refining Company, Inc.

Say you saw it in The OIL WEEKLY

	June 15 1927
38 to 38.9 gravity	1.43
39 to 39.9 gravity	1.45
40 and above	1.47

*Humble Oil & Refining Company's postings on Gulf Coast Light stop at 35 to 35.9. Its price on all crudes above 35 is $1.37 per barrel.

Magnolia Petroleum Company's postings stop at 31 to 31.9.

MARKHAM
The Texas Company

All grades	1.00

LULING

All grades	1.00

TEXAS PANHANDLE
Magnolia Petroleum Company

Hutchinson, Carson and Gray counties, all grades	.95

Humble Oil & Refining Company, Gulf Refining Company and Kay County Gas Company

all grades	.95

Gray and Wheeler Counties
Humble Oil & Refining Company

28 to 28.9 gravity	.80
29 to 29.9 gravity	.82
30 to 30.9 gravity	.84
31 to 31.9 gravity	.86
32 to 32.9 gravity	.88
33 to 33.9 gravity	.90
34 to 34.9 gravity	.92
35 to 35.9 gravity	.94
36 to 36.9 gravity	.96
37 to 37.9 gravity	.98
38 to 38.9 gravity	1.00
39 to 39.9 gravity	1.02
40 to 40.9 gravity	1.04
41 to 41.9 gravity	1.06
42 to 42.9 gravity	1.08
43 to 43.9 gravity	1.10
44 and above	1.12

Crane-Upton-Crockett* Counties
Gulf, Humble and Kay County Gas Company

Below 26 gravity	.70
26 to 26.9 gravity	.72
27 to 27.9 gravity	.74
28 to 28.9 gravity	.76
29 to 29.9 gravity	.78
30 to 30.9 gravity	.80
31 to 31.9 gravity	.82
32 to 32.9 gravity	.84
33 to 33.9 gravity	.86
34 to 34.9 gravity	.88
35 to 35.9 gravity	.90
36 and above	.92

*Gulf does not post in Crockett County.

Magnolia Petroleum Company and Kay County Gas Company

Howard County (Chalk Field)	1.05

WYOMING-MONTANA
Wyoming

Byron	1.43
Ferris	1.[illegible]
Elk Basin	1.43
Grass Creek	[illegible]
Rock Creek	1.25
Lost Soldier	[illegible]
Lance Creek	[illegible]
Mule Creek	1.10
Notches	[illegible]
Big Muddy	1.25
Osage	1.[illegible]
Hamilton Dome	85
Pilot Butte	1.75
Torchlight-Greybull	1.55
Lander	80
Simpson Ridge	80
Rex Lake	1.10
South Casper Creek-Poison Spider	1.00

Salt Creek
Midwest Refining Company

29 to 29.9 gravity	1.14
30 to 30.9 gravity	1.16
31 to 31.9 gravity	1.18
32 to 32.9 gravity	1.20
33 to 33.9 gravity	1.22
34 to 34.9 gravity	1.24
35 to 35.9 gravity	1.26
36 to 36.9 gravity	1.28
37 and above	1.30

MONTANA

Sunburst	1.35
Cat Creek	1.33
Lake Basin	2.20

	June 15 1927
NEW MEXICO	
Artesia	1.00
Hogback	1.38
CANADIAN CRUDE	
Oil Springs	2.18
Petrolia	2.11

*Bounty on Canadian crude is ¾ cent per gallon, or 26¼ cents per barrel.

LOUISIANA-ARKANSAS
(Standard of Louisiana, Louisiana Oil Refining Company, Gulf Refining Company of Louisiana and The Texas Co.) Homer, Haynesville, Caddo, El Dorado, De Soto and Chrichton.

Below 28 gravity	1.10
28 to 28.9 gravity	1.12
29 to 29.9 gravity	1.14
30 to 30.9 gravity	1.26
31 to 31.9 gravity	1.18
32 to 32.9 gravity	1.20
33 to 33.9 gravity	1.22
34 to 34.9 gravity	1.24
35 to 35.9 gravity	1.26
36 to 36.9 gravity	1.28
37 to 37.9 gravity	1.30
38 to 38.9 gravity	1.32
39 to 39.9 gravity	1.34
40 to 40.9 gravity	1.36
41 to 41.9 gravity	1.38
42 to 42.9 gravity	1.40
43 to 43.9 gravity	1.42
44 to 44.9 gravity	1.44
45 to 45.9 gravity	1.46
46 to 46.9 gravity	1.48
47 to 47.9 gravity	1.50
48 to 48.9 gravity	1.52
49 to 49.9 gravity	1.54
50 to 50.9 gravity	1.56

	June 15 1927
51 to 51.9 gravity	1.58
52 and above	1.60

Atlantic Oil Producing Company posts this same schedule on Homer, Haynesville, and West El Dorado.

Magnolia Petroleum Company has the same posting on Pine Island, Haynesville, Eldorado and Bull Bayou.

STEPHENS
(All Companies)

Below 28	1.00
28 to 28.9 gravity	1.02
29 to 29.9 gravity	1.04
30 to 30.9 gravity	1.06
31 to 31.9 gravity	1.08
32 and above	1.10

SMACKOVER
(Louisiana Oil Refining Company, Atlantic Oil Producing Company, and Shreveport-Eldorado Pipe Line Company)

Below 24 gravity	$1.00
24 to 27.9 gravity	1.15
28 to 28.9 gravity	1.17
29 to 29.9 gravity	1.19
30 and above	1.21

Other Companies

Below 24 gravity	1.00
24 and above	1.25
Bellevue	1.25
Jennings	1.15
Vinton	1.30
Edgerly	1.30
Starks Dome	1.30
Urania	1.00
Cotton Valley	1.00
Calion	1.00

IMPORTS OF PETROLEUM AT PRINCIPAL UNITED STATES PORTS
(American Petroleum Institute Figures. Barrels of 42 gallons)

AT ATLANTIC COAST PORTS—	Total Month May	Total Month April	Week En'd June 4	Week En'd May 28
Baltimore	324,000	380,000	169,000	75,000
Boston	237,000	131,000	.....	.....
New York	570,000	1,430,000	238,000	78,000
Philadelphia	286,000	453,000	.....	.....
Others	193,000	399,000	150,000	.....
Total	1,610,000	2,793,000	557,000	153,000
Daily average	51,935	93,100	79,571	21,857
AT GULF COAST PORTS—				
Total Atlantic and Gulf Coast Ports	**1,610,000**	**2,793,000**	**557,000**	**153,000**
Daily average	51,935	93,100	79,571	21,857
DISTRIBUTION OF TOTAL CALIFORNIA OIL RECEIPTS IS AS FOLLOWS:				
Crude	243,000	*738,000	150,000	75,000
Gasoline	719,000	861,000	245,000	78,000
Gas Oil	310,000	148,000	.....	.....
Fuel Oil	338,000	*988,000	162,000	.....
Lubricants	.....	58,000	.....	.....
Total	1,610,000	2,793,000	557,000	153,000

*Revised.

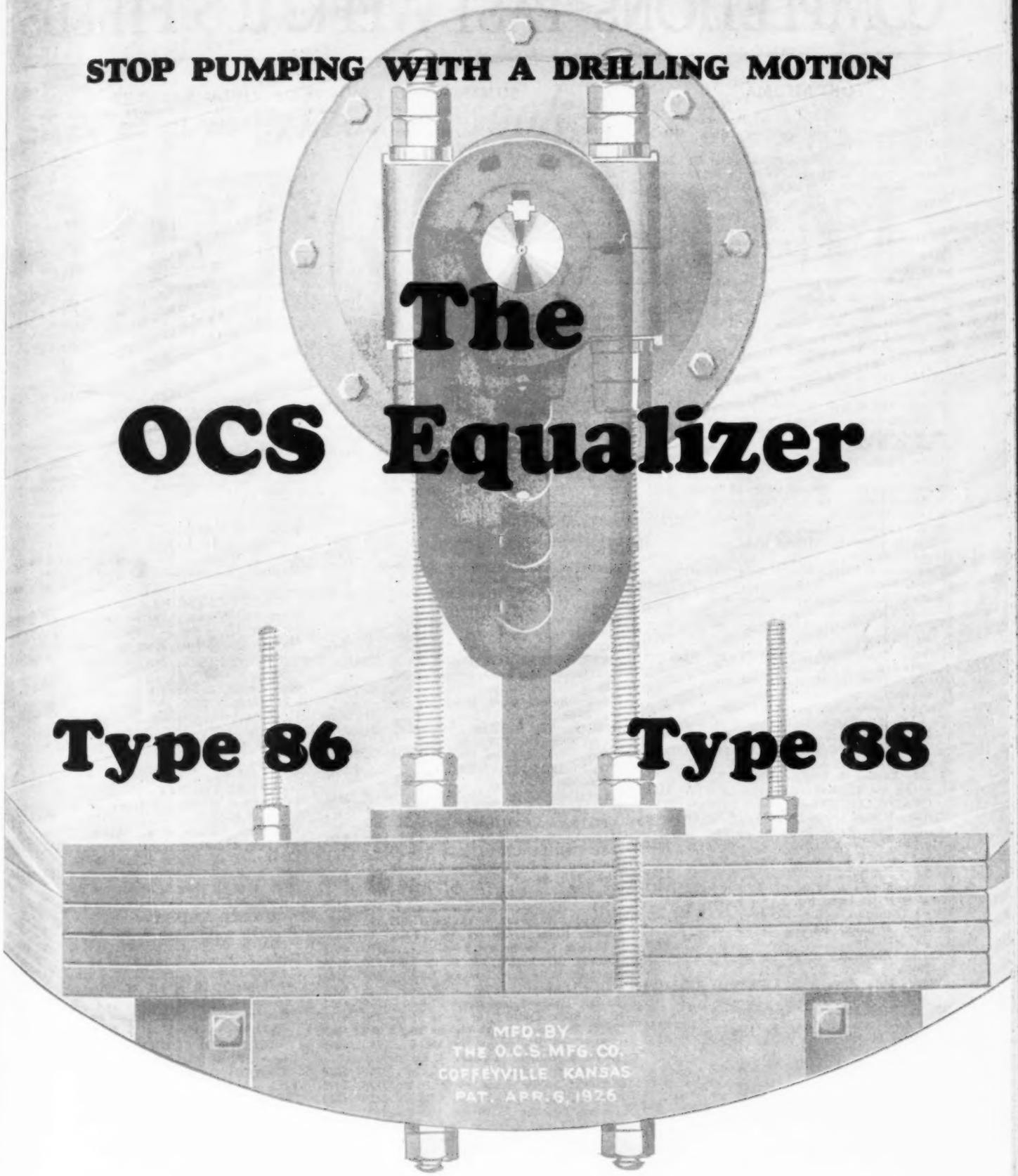
RECEIPTS OF CALIFORNIA OIL AT ATLANTIC AND GULF COAST PORTS
(American Petroleum Institute Figures. Barrels of 42 gallons)

AT ATLANTIC COAST PORTS—	Total Month May	Total Month April	Week En'd June 4	Week En'd May 28
Baltimore	652,000	681,000	170,000	62,000
Boston	304,000	271,000	62,000	* .....
New York	2,897,000	1,861,000	703,000	* 651,000
Philadelphia	241,000	182,000	20,000	78,000
Others	731,000	797,000	146,000	* 148,000
Total	4,825,000	3,792,000	1,101,000	* 939,000
Daily average	155,645	126,400	157,285	* 134,143
AT GULF COAST PORTS—				
Galveston District	56,000	152,000	.....	20,000
New Orleans and Baton Rouge	949,000	541,000	145,000	229,000
Port Arthur and Sabine District	60,000	.....	.....	60,000
Tampa	.....	.....	.....	.....
Total	1,065,000	693,000	145,000	309,000
Daily average	34,355	23,100	20,715	44,143
AT ALL UNITED STATES PORTS—				
Total	5,890,000	4,485,000	1,246,000	*1,248,000
Daily average	190,000	149,500	178,000	* 178,286

*Revised.

STOP PUMPING WITH A DRILLING MOTION

The OCS Equalizer



Type 86 Type 88

COMPLETIONS FOR PAST WEEK IN U.S. FIELDS

OKLAHOMA

Company, Well and Location	Initial Production Bbls.	Depth
CARTER COUNTY—		
Magnolia, J. J. Hardin 7, ne 19-1s-3w	80	3470
Carter, Pierce 2, sw 8-2s-2w	¶15	1977
Atlantic, Gladney 1, se ne ne 16-2s-2w	75	1370
Magnolia, Adams 11, se ne ne 10-2s-3w	30	3122
J. Lohman 14, se sw se 23-2s-3w	75	2516
C. R. Smith, Fee 6, ne nw 26-2s-3w	35	3610
Amerada, Criner 11, sw nw ne nw 20-5s-1e	*	2610
CREEK COUNTY—		
T. B. Slick, B. B. Jones 6, sw ne sw 32-14-10e	50	3422
Empire, Walker 3, se nw sw 32-14-10e	60	2806
Sinclair, Long 15, nw sw sw 9-18-7e	90	2521
Silurian Oil, W. Starr 23, c w l e½ ne ne 17-18-7e	200	2516
Shaffer Oil & Ref., Morrison 4, ne sw sw 16-17-8e	10	3498
Shaffer Oil & Ref. & Prairie O&G., Wright-Bruner 1, c e l se 17-17-8e	140	3478
R. F. Billingslea, Lewis 1, se sw sw 10-15-8e	¶51	3197
Lima O&G., Benjamin 4, nw se sw 30-15-8e	¶24	3268
Pure, Mitchell 2, nw sw ne 29-14-8e	200	3443
Redgraves et al, Snow 2, sw se se 15-18-11e	45	2160
C. G. Tibbins, Grayson 1, se 5-18-12	225	1771
Elson & Amerada, Wilcox 1, ne nw nw 12-17-10e	650	2396
Thompson & Black, Wilson 2, sw sw 16-17-11e	¶7	1941
Burk-Greis Oil, Strip 2, se nw sw 16-17-8e	*	3507
Varghn & Wheeler, Allen 6, nw se sw 27-18-10e	*	2380
Gypsy, McGuire 23, nw sw sw ne 10-18-11e	*	....
O. N. White et al, Tiger 1A, ne sw nw	*	700
Carter, Griswell, sw se sw 1-17-10e.	*	3002
J. H. Wright, Dawson 10, c e l sw 24-17-10e	*	3432
Williams & Bell, Allen 1 sw nw ne 36-16-09e	*	3480
J. M. Kessler & Logan, Morton 1, se sw nw 27-14-10	*	3352
GRADY COUNTY—		
Gypsy, Hogue 1, ne 20-3n-5w	¶7	2409
Carter, Eva Nation 3, sw ne se 34-?3n-5w	¶25	2235
Scharmack 3, nw sw sw 35-3n-5w	35	1525
Givin-Simms 8, se ne nw 2-2n-5w.	10	1477
Walter H. Holmes, No. 1, c s l n½ sw 16-8n-13w	*	....
Garvin Drilling, Pursley 1, sw ne sw 16-4n-6w	*	3009
Carter, Abernathy 2, sw ne sw 35-3n-5w	*	....
Woods Pet., Hays 1, ne 23-7s-7w	*	2504
HUGHES COUNTY—		
Berry Pet., Alexander 5, ne sw nw se 4-9-9	10	3314
Roxana, Powell 2, ne nw ne 35-9-9	*	3300
KAY COUNTY—		
Wentz Oil Corp., Andrews 1G, nw ne 8-28-1w	¶3½	1592
National Ref., Buessing A1, ne sw sw nw 21-27-1e	¶250	870
McCullough et al, Love 1, se sw sw 31-27-1w	*	3125
MUSKOGEE COUNTY—		
Harry Smith, Pouncil 5, nec sw ne 25-15-15e	¶2½	711
W. J. Metzger et al, G. Crittendon 4, ne se ne se 6-14-19e	40	763
C. M. Bradley, Goodrich 5, ne sw nw sw 5-14-19e	100	725
D. C. Lampton et al, T. Caroline 2, sw nw sw 9-15-18e	¶5	765
J. L. Selby, Warner 2, ne se sw ne 17-15-17e	*	1462
OKMULGEE COUNTY—		
French & Garrett, Strip 1, nw ne ne 7-11-12e	10	1381
Jordan & Thompson, Thorburg 1, c nw ne 27-16-21e	¶2½	1933

SUMMARIZED REVIEW OF FIELD RESULTS

State—	Completions This Week	Completions Last Week	Producers This Week	Producers Last Week	Gas Wells This Week	Gas Wells Last Week	Failures This Week	Failures Last Week	Initial Production This Week	Initial Production Last Week
Arkansas	7	7	2	4	2	..	3	3	210	591
California	24	15	21	15	..	..	3	..	17,763	10,561
Colorado	..	..	..	..	..	..	..	..	....	....
Indiana	7	3	4	3	..	..	3	..	71	162
Illinois	2	3	2	..	..	..	..	3	21	....
Kansas	20	19	9	7	1	1	10	11	1,850	1,715
Kentucky	29	29	18	21	3	3	8	5	991	696
Louisiana	25	11	12	3	2	1	11	7	1,595	130
Michigan	1	5	1	4	..	..	..	1	20	72
Mississippi	..	..	..	..	..	..	..	..	....	....
Montana	3	5	3	1	..	2	..	2	1,570	10
New York	19	..	18	..	..	..	1	..	73	....
New Mexico	..	..	..	..	..	..	..	..	....	....
Ohio	22	43	13	24	5	8	4	11	383	692
Oklahoma	102	94	55	53	17	5	30	36	43,323	65,335
Pennsylvania	74	4	60	..	13	3	1	1	319	....
Tennessee	..	..	..	..	..	..	..	..	....	....
Texas	134	112	87	67	8	2	39	43	28,334	22,606
West Virginia	14	32	4	7	8	20	2	5	43	170
Wyoming	11	4	2	4	..	..	9	..	850	345
Totals	494	386	311	213	59	45	124	128	97,416	103,085
Increase this week	108	..	98	..	14	..	..	..	....	....
Decrease this week	..	..	..	..	..	..	4	..	45,565	....

NOTE—Following is the explanation of abbreviations, signs, etc., used in completion and wildcat reports: *—dry hole, abandoned well; ‡—salt water; †—junked and abandoned; ¶—million cubic feet of gas; abn—abandoned; bbls—barrels; b. s.—basic sediment; cas—casing; co—cleaning out; dk—derrick; dr—drilling; fsh—fishing; ft—feet; in—inches; loc—location; m—milling; n, s, e, w—north, south, east, west; r—reaming; sd—shut down; sdtr—sidetracking; sp—spudding; sr—straight reaming; std—standardizing; sw—salt water; td—total depth; ur—underreaming; wo—workover; wosr—waiting on standard rig.

OSAGE COUNTY—		
J. C. Stine, 7, nw se se 9-21-12e	10	1332
Okla. Nat. Gas, 767, se ne 27-21-10e	¶5	1640
George Parker, 2, nw ne sw 28-26-6e	315	2986
Skelly Oil, 6, sw nw sw 27-27-6e	1440	2952
George Parker, 3, ne nw sw 28-26-6e	330	2970
Winona Oil, 1, se ne se 17-21-11e	*	2417
Sand Springs Home Oil, 1, sw 22-20-11e	*	2046
Barnsdall, 1, c s l sw ne 19-25-6e	*	2950
PAWNEE COUNTY—		
Continental, Markin 2, sw ne se 32-20-5e	80	2835
George Baker, Cave 1, ne sw sw 10-20-6e	¶7	3096
C. H. Burton, 1, se nw nw 18-21-8e	10	2050
PAYNE COUNTY—		
Roxana, Stower 1, sw 13-19-4e	8	3731
OKFUSKEE COUNTY—		
A. D. Morton, Grayson 1, sw se 23-11-11e	*	3581
J. J. Deaner, Sullivan 1, sw 2-12-11e	*	....
POTTAWATOMIE COUNTY—		
Magnolia, Bryant 2, se sw nw 9-8-5	3590	4284
SEMINOLE COUNTY—		
McMann O&G., Thompson 1, sw se sw 33-11-8e	155	4196
Magnolia, Anderson 4, swc nw 15-9-5	590	4350
Amerada, Anderson 4, sw nw 15-9-5	590	4350
Carter, Kiker 1, sw nw sw 2-9-6	45	3570
Frazier 5, sw ne nw 3-9-6	2600	4432
Roxana, Strothers 1, nw sw ne 3-9-6	510	4164
Sinclair, Polly 2, ne sw nw 3-9-6	600	4155
Carter, Lukes 5, ne se ne 27-9-6	1025	4092
Carter, Lukes 6, sw se ne 27-9-6	1200	4112
T. B. Slick, Cudjo 3, ne se sw 35-9-6	250	4175
Pure, Strothers 2B, ne nw nw 36-9-6	860	4248
Strothers B3, sw nw nw 36-9-6	2790	4248
Jarvis & Holmes, Lowery 1, ne sw ne 7-9-8	130	3328
Atlantic, Taylor 1, sw se se 10-8-6	3175	4028
Carter, Harjoche 1, sw nw 14-8-6	2310	4137
Carter, Jarjoche 1, sw nw 14-8-6	2495	4152
Empire, Lacey 2, sw se 14-8-6	2310	4137
Pure, Reed 5, se sw se 14-8-6	3425	4220
Carter, Walker 1, ne sw se 15-8-6	2910	4122
Gypsy, Walker 2, ne sw se 15-8-6	1170	4156
Minnehoma Oil, Bowlegs 2, ne sw sw 15-8-6	820	4278
I. T. I. O., Wilmouth 3, sw ne ne 15-8-6	2120	4236
Roxana, Taylor 1, se ne 16-8-6	585	4317
Mid-Continent, Hutka 1, nw ne sw 24-8-6	1750	4195
Gypsy, Brown 1, se se 33-8-6	985	3358
Homa Okla. Oil, J. A. Brown 2A, ne sw se 29-8-8e	185	3993
Carter, Payne 3, ne nw se 21-9-5	*	....
Sinclair, Jones 1, nw sw sw 15-9-5	*	3554
Kingwood & Roxana, Harjo 6, sw se se 22-8-6	*	4136
Marland & Midcontinent, M. Bull 1, sw nw 16-9-7	*	4416
Atlantiic, Jones 2, nw se se 16-8-6	*	1272
Magnolia, R. Jackson 1, ne 2-8-7	*	5215
Harjo 1, ne se 29-7-8	*	4268
STEPHENS COUNTY—		
Magnolia, Johnson 5, se ne 24-1s-9w	¶5	2293
Kabay 17, se sw 34-1s-8w	60	1726
Margay Oil, Reeder 2, se ne se 12-1s-9w	*	2250
TULSA COUNTY—		
Welch et al, Berryhill 1 A, ne se se 18-17-13e	¶2	2187
C. G. Tibbens, Gregory 2, se sw 14-18-12e	¶3	1562
Holmes et al, Storm 2, se 25-19-10e	*	2250

KANSAS

BUTLER COUNTY—		
Schwartz et al, Hazlett 1, nw sw se nw 19-25-5e	30	723
Rosenthal, Lassen et al, Shaffer 5, se sw se 4-27-6e	300	3144
Christy et al, Harris 1, sw se 14-27-7e	100	2716
Morgan et al, King 1, se nw nw 24-28-6e	*	3200
COWLEY COUNTY—		
Twin State, Goodrich 3, ne sw se 21-31-4e	45	2401
Rothe & Faurot, Townlot 1, ne se nw 22-32-4e	¶4	2307
Townlot 1, lot 3, blk 46, City of Winfield 22-32-4e	100	2467
Brinn et al, Goodrich 1, sw ne ne 33-31-4e	*	3471
DICKINSON COUNTY—		
Leeward Pet. Jones 1, ne 23-13-3e	*	3011
GREENWOOD COUNTY—		
Loye & Leader, Oliver 1, sw se 26-22-11e	*	1998
Scott et al, Teter 1, nw ne se 15-23-9e	*	3425
Flack et al, McGinnis 1, ne se 26-26-8e	*	2560
Murphy et al, Edwards 1, ne sw 7-26-10e	*	2169
RICE COUNTY—		
Phillips, Welch 1, sw ne sw 35-20-6w	25	3450
T. B. Slick, Dutton 1, se nw sw 25-26-9w	*	4507
Mississippi Valley O&G., Trotter 1, c ne 34-21-7w	*	4012
RUSSEL COUNTY—		
Mid-West, Merimis 3, se 18-12-15w	*	....
SUMMER COUNTY—		
Roxana, River Bed 6, c n½ 36-31-2e	650	1910
Taton 2, ne nw nw 36-31-2e	600	1892

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PETROLEUM

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P. O. Box 1307 ◆ Houston, Texas

EASTERN STATES

PENNSYLVANIA

Company, Well and Location	Initial Production Bbls.	Depth
BRADFORD FIELD—		
South Penn Oil Co., Bingham 150, tract 82	7	....
Bingham 533, tract 88	4	....
Bingham 151, tract 35	3	....
Bingham 399, Tract 1	3	....
Bingham 416, tract 12	2	....
Bingham 212, tract 44	2	....
Bingham 390, tract 1	3	....
Riddle Estate 54	4	....
Riddle Estate 55	3	....
Jones 225	3	....
Jones 226	3	....
Smith 143	2	....
Smith 144	2	....
Fee 1	5	....
Melvin 193	2	....
Dent 110	2	....
Forest Pet. Corp., Drake Heirs 1-G-25	7	....
Drake Heirs 1-G-8	4	....
Drake Heirs 1-G-72	5	....
Drake Heirs 1-G-70	15	....
Drake Heirs 1-H-10	40	....
Drake Heirs 1-H-19	12	....
Taylor 1-E-6	3	....
Taylor 1-D-7	2	....
Taylor 1-E-17	4	....
Sims 1-A-4	3	....
Sims 1-B-19	3	....
Sims 1-B-21	4	....
Sims 1-B-22	3	....
Hazlewood Oil Co., Lot 27, tract 132	2	....
Lot 27, tract 133	2	....
Bingham 132	5	....
Franchot, Tr., Rounds 1	12	....
Rounds 2	5	....
Pennsylvania Oil Prod. Co., Fee 1	8	....
Associated Prod. Co., Bingham 582, tract 380	10	....
Phoenix Oil Co., Clark & Kennedy 168	7	....
James W. Looker, Willetts Estate 1	7	....
W. E. Williams, Williams 22	5	....
T. H. Kennedy, Kennedy 33	7	....
A. J. Vantine, Vantine 1	5	....
W. C. Kennedy Co., Kennedy 60	7	....
L. H. Smith & Son, Garlock 10	3	....
E. D. Kepner, Kepner 6	7	....
GREENE COUNTY—		
Carnegie Nat. Gas Co., Elmira Jones 1	¶¼	....
A. D. Jones 1	¶¼	3208
J. C. Morris 3	¶2	....
A. H. Jones 1	¶2¼	....
Manufacturers Light & Heat Co., F. & L. Rutan 1	¶3	....
Independent O. & G. Co., I. P. Warier 2	¶1½	....
Wasmuth, Callahan & Co., Mrs. Mack Goodwin 1	¶1½	....
South Penn O. Co., Earnest Hedlee 3	10	....
George Freshwater, Hugh Laughlin 3	*	....
ALLEGHENY COUNTY—		
J. A. Walley & Co., James E. Carroll 1	15	....
VENANGO COUNTY—		
Grimm & Jenkins, Foster 27	2	....
Foster 28	2	....
National Pet. Co., Blank 11	2	....
Blank 12	2	....
F. E. Kapp & Co., Kapp 6	4	....
S. G. Milton, Milton 71	4	....
Midland Oil Corp., McNellie 34	3	....
Plum Oil & Gas Co., Hasson 1	3	....
Franklin Trust Co., Cassidy 7	2	....
M. C. Keely & Co., Schreffler 1	¶½	....
BUTLER COUNTY—		
Charles Hilderbrand, Shroup 6	¶1¼	....
H. R. Parker, McGuire 1	¶1	....
Nebel & Co., Mershon 1	¶1¼	....
CENTER-MIDDLE FIELD—		
J. M. Sharp, Rockwell 4	7	....
Rembold & Co., Osgood 14	7	....
Rieg & Hickey, Lot 2, tract 4	3	....
CLARION COUNTY—		
Neely-Clover Oil Co., Stewart 7	3	....
Alum Rock Gas Co., Gillingham 4	3	....
Beary & Co., Moran 1	¶1	....
Moran 2	¶1	....

NEW YORK

Company, Well and Location	Initial Production Bbls.	Depth
ALLEGANY COUNTY—		
J. K. Cachran & Co., McDermott 1	7	....
McDermott 2	*	....
W. E. McMurdy & Co., Birtiel 1	7	....
Forest Oil Corp., Forest 300	5	....
Forest 305	3	....
Forest 307	3	....
N. V. V. Franchot Tr., Meridian 3	3	....
Zimbauer 5	3	....
Empire Gas & Fuel Co., Empire 13	3	....
Empire 14	5	....
Wilbart Oil Co., McDermott 1	7	....
State Bank of Bolivar, Reid 24	5	....
F. J. McDermitt, McDermitt 1	4	....
S. J. Cleveland, Cleveland 1	4	....
Leland Oil Co., Leland 3	3	....
South Penn Oil Co., Kinley 4	3	....
M. J. Crowley & Co., Coast & Co. 5	4	....
S. E. Wrightsman & Co., Woodard 1	2	....
Charles Phillips, Phillips 1	2	....

WEST VIRGINIA

Company, Well and Location	Initial Production Bbls.	Depth
DODDRIDGE COUNTY—		
Hope Construction & Ref. Co., Harvey Smith 1	¶1	....
Nay & Kintzner, F. W. Waldo 2	¶1	....
W. D. Gribble, Alexander Stuttler 1	*	....
MARSHALL COUNTY—		
Hope Cons. & Ref. Co., I. W. Logsdon 6	5	....
Manufacturers Light & Heat Co., S. C. Howard 1	¶2	....
ROANE COUNTY—		
Federal O. & G. Co., Provident Mining Co. 38	*	....
Heck Oil Co., D. H. Burroughs 5	5	....
LINCOLN COUNTY—		
C. C. Wolfe & Co., J. M. Bird 1	¶¼	....
Meabon & Huffman, Chas. Gillenwater 7	¶¼	....
CALHOUN COUNTY—		
Martin Crowley, John Slider 1	¶1¼	....
W. H. Bickel, J. H. Barnes 1	¶1½	....
RITCHIE COUNTY—		
Hope Const. & Ref. Co., I. M. Smith 5	25	....
WOOD COUNTY—		
Dr. Ira Connelly, N. L. Upton 1	8	....
CABELL COUNTY—		
Monickle Gas Co., C. A. Nicholas 1	¶½	....

KENTUCKY

Company, Well and Location	Initial Production Bbls.	Depth
WARREN COUNTY—		
Onsel Bros. & Co., C. G. Davenport 16	6	1070
S. E. Silverthorn, W. H. McGinnis 3	*	325
R. B. Walker, Edward Meyers 1	*	....
John Crosby 1	*	....
Morrow & Hays, D. N. Taylor 1	*	920
OHIO COUNTY—		
Lee & Engle, J. I. Bartlett 3	100	677
White Plains Oil & Gas Co., Ura Howard 1	30	470
Rex-Pyramid Oil Co., W. S. Ambrose 7	120	629
Wood Oil Co., Mary Elmore 4	70	655
Mary Elmore 5	125	650
James C. Ellis, J. R. Weller 14	140	623
J. R. Weller 15	160	641
J. R. Weller 16	175	615
Creek Drilling Co. & Hapgood K. Hogan 1	*	587
FLOYD COUNTY—		
Ivyton Oil & Gas Co., A. J. Shepard 2	¶2½	....
Marion Hunter 1	¶2½	....
LAWRENCE-JOHNSON COUNTIES—		
Townsend & Garrison W. W. Bailey 6	7	....
MORGAN COUNTY—		
The Hargus Oil Co., Mark Bays 13	5	....
BARREN COUNTY—		
Esslinger Oil Co., Carl Nichols 7	¶2	404
Little Colonel Oil Co., Tom Smith 4	7	....
Tom Smith 5	8	348
J. D. White & Co., Nichols 3	10	....
Nichols 4	10	....
Breeding & Jones, Mayfield 2	5	571
J. J. Sayer, Hatfield 11	7	....
Payne & Pedigo, Turner 1	6	537
A. W. Ziegler Trus., Darter 10	*	....
Sanson Oil Co., Peden 1	*	....
Merrifield & Hedges, Pacé 1	*	....

SOUTHEASTERN OHIO

Company, Well and Location	Initial Production Bbls.	Depth
MORGAN COUNTY—		
Dailey O. & G. Co., Roy Floyd 1	¶½	....
Hope Construction & Ref. Co., Art Floyd 3	¶½	....
WASHINGTON COUNTY—		
J. O. Harlon & Co., Lewis Baker 1	¶1¼	....

CENTRAL OHIO

Company, Well and Location	Initial Production Bbls.	Depth
GUERNSEY COUNTY—		
Eastern Carbon Black Co., A. E. Kerr 2	20	....
R. F. Ruby 2	50	....
Ohio Fuel Supply Co., Lenora Fulton 6	35	....
Gambet Oil & Gas Co., David Tedrick 1	*	....
LICKING COUNTY—		
Hope Construction & Ref. Co., C. O'Bannon & Co. 2	92	....
H. W. Brown 2	42	....
HOCKING COUNTY—		
Ohio Fuel Supply Co., H. P. Hess Trustee 2	60	....
Gordon Oil Co., O. F. Pierepoint 7	40	....
HOLMES COUNTY—		
The Kemrow Co., Mary A. Beeler 1	10	....
CUYAHOGA COUNTY—		
The Logan Gas Co., Demott Winslow 2	¶¼	....
PERRY COUNTY—		
Atha Oil Co., Melick Bros. 12	¶¼	....
MUSKINGUM COUNTY—		
John Swisher & Co., Wm. Lyons 1	*	4456
MEDINA COUNTY—		
Emp're Gas & Fuel Co. C. G. Wilber 1	*	....
ATHENS COUNTY—		
Ohio Oil & Gas Co., Clint Atkinson 6	*	....

NORTHWESTERN OHIO

Company, Well and Location	Initial Production Bbls.	Depth
MERCER COUNTY—		
A. C. Grace, James Harner 1	8	1162
James Harner 2	12	1163
A. W. Neely & Co., H. J. Stackler 8	9	1173
SANDUSKY COUNTY—		
Martin J. Beaty, J. & H. F. Hufford 3	5	1371
AUGLAIZE COUNTY—		
H. F. Kelly & Co., M. Kelly 1	3	1177

INDIANA

Company, Well and Location	Initial Production Bbls.	Depth
JAY COUNTY—		
R. R. Ridenour Tr., C. Brinkerhoff 4	20	....
Masters & Sanders, D. R. Hapner 1	*	....
Heeter & Sanders, A. C. Brown 1	*	....
GIBSON COUNTY—		
Bell Bros. Frank Thompson 1	35	1580
Gray, Morrisey & Co., M. A. Mauck 2	1	1635
ADAMS COUNTY—		
G. B. & W. Oil & Gas Co., Fred. Kauffman 4	15	....
PIKE COUNTY—		
Claud Chandler & Co., Lona Miley 1	*	1350

ILLINOIS

Company, Well and Location	Initial Production Bbls.	Depth
WABASH COUNTY—		
J. S. Young & Co., Polley Barney 1	16	1390
Phipps, Blosser & Co., J. B. Clark 1	5	1095

MICHIGAN

Company, Well and Location	Initial Production Bbls.	Depth
SAGINAW COUNTY—		
J. & S. Dev. Co., Clark & Michigan Streets 1	20	1830

MOUNTAIN STATES

WYOMING

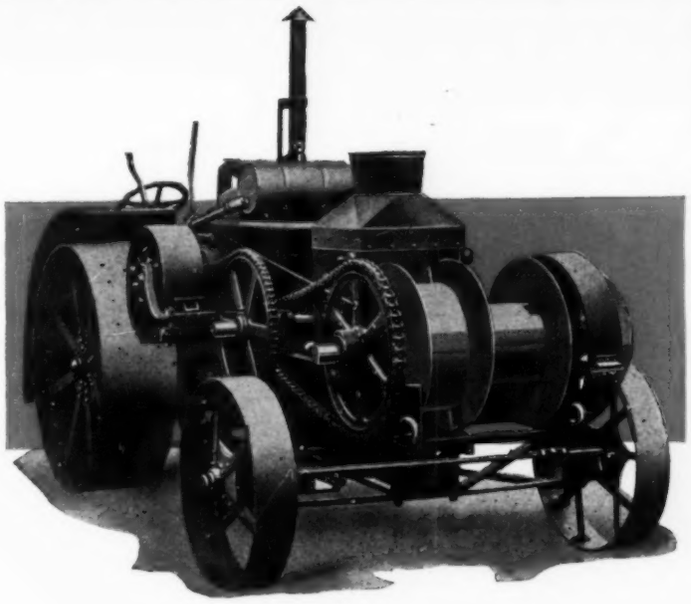
Company, Well and Location	Initial Production Bbls.	Depth
SALT CREEK—		
Midwest Oil Co., 16L, ne 35-40-79	435	2436
Wyoming Asso. 13L, nw 26-40-79	415	2484
Wyoming Asso. 15, nw 26-40-79	*	1153
Midwest Oil Co., 13	*	1202

MONTANA

Company, Well and Location	Initial Production Bbls.	Depth
KEVIN-SUNBURST—		
Barnhill Oil Co., Skinner 2, ne 18-34-1w	50	1382
California Co., Lorenson 8, se 28-35-2w	1375	1518
Ogden-Kevin Oil Co., Zachor 1, 20-35n-1w	150	....

CALIFORNIA

Company, Well and Location	Initial Production Bbls.	Depth
SEAL BEACH—		
Associated, Hellman 21	1337	4873
Calif. Eastern, Horwitz 1	1430	4698
Alamitos 2	1900	4854
Geo. F. Getty, Alamitos 2, wo	2435	4800
Marland, Bixby 17	1300	4500
Selover 11	1230	4809
Selover 12	1590	4844
Petroleum Securities, Marquis 1	2400	4860
LONG BEACH—		
Graham & Loftus, No. 3, wo	1900	5367
ATHENS-ROSECRANS—		
Union, Jamison 1	*	4989
DOMINGUEZ—		
Union, Hellman 15	300	4319



The Rumely OilPull Tractor Winch Tractor

Built exclusively for oil field service. . . .not an attachment to convert a farm tractor into an oil field equipment.

IT'S BUILT COMPLETELY AS ONE UNIT IN OUR OWN PLANT. . . .the largest tractor builders in the world. . . . and one organization only need be called upon for service and repair parts. Thirty-three factory branches in the United States at our command for service at all times.

OUR SPECIAL OIL FIELD DEPARTMENT IS DEVOTED EXCLUSIVELY TO OIL FIELD WORK AND HANDLING OF OIL FIELD PROBLEMS.

The Rumely OilPull Tractor Winch Tractor is a complete unit . . . .built to meet your tractor winch problems and is delivering efficient service to its many users.

EVERY RUMELY OilPull Tractor WINCH TRACTOR THAT HAS EVER BEEN SOLD IS STILL RUNNING.

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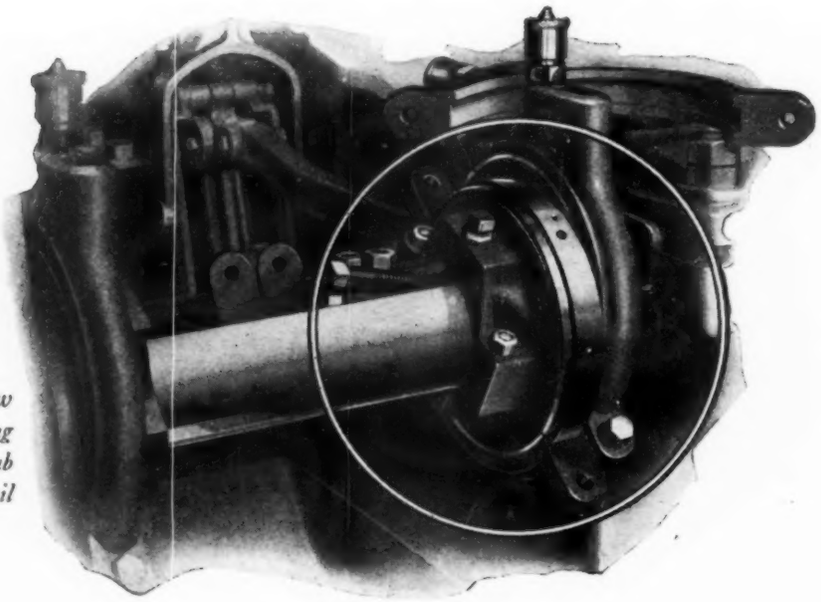
Two Improvements for Ideal-Ajax



Photograph shows how the new bronze bushing fits between eccentric hub and strap. It has oil holes for lubrication.

New Bronze Bushed Eccentric Straps

Split Bronze Bushing placed between Eccentric Strap and Hub, takes all wear, easily replaced.

Bushing made of best bearing bronze, eccentric straps made of malleable iron.

Can be quickly attached to eccentric hubs not equipped with this feature.

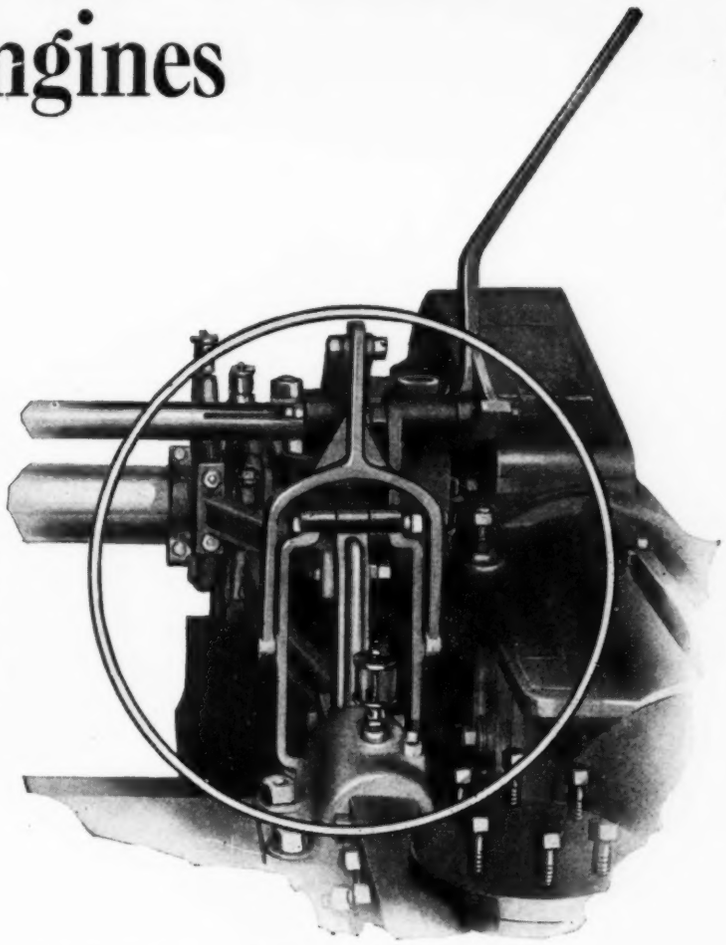
Holes in Bushing and Groove in Strap provide ample lubrication.

Made by
AJAX IRON WORKS
Corry, Pa.

AJAX-DRILLING

Drilling Engines

AJAX ENGINES

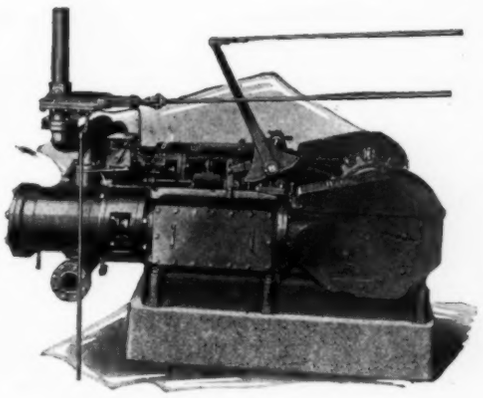


Photograph of new Ajax reverse link lifter. Ajax was the first to use the link reverse and the first to use hardened and ground link roller.

New Reversing Link Lifter

Easier to reverse, less wear on reversing parts. Lifter Yoke attached to side Brackets lifting link from center instead of top, cuts down the motion required to reverse and eliminates vibration of reversing parts.

Yoke and Bracket made of cast steel, bronze bushings in yoke, hardened and ground Bracket Pins, Drake Lock Nuts on Bracket to Link Bolts.



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THE NATIONAL SUPPLY COMPANIES

In every oil field

STEAM ENGINES

Say you saw it in The OIL WEEKLY

Company, Well and Location	Initial Production Bbls.	Depth
MONTEBELLO—		
St. Helens Pet. Co., Monterey 14..	300	4328
Standard, Whitehead 1	40	5165
RICHFIELD—		
Continental, Pyne 5	453	4401
Superior Oil Co., Etchandy 1	200	4555
Union, YLG 14	60	2966
PIRU DISTRICT—		
Belleview Oil Syn., No. 1T	*	3740
Temescal Pet. Co., B. & L. 4.....	*	2507
KERN COUNTY—		
Elbe Oil Co., No. 1	250	2074
MARICOPA FLATS—		
Standard, Rass 4	52	4842
MIDWAY—		
Interstate Oil Corp., Perris 6-A, 15-32-32	125	2713
ELK HILLS—		
Standard No. 26, 31-30-25	81	3202
KERN FRONT—		
Chanslor-Canfield Midway No. 4, 23-28-27	250	2340
Standard No. 5, 15-28-27	130	2196

ARKANSAS

OUACHITA COUNTY—		
Imperial O. & G. Co., McClanahan 9, 6-16-15, ...	¶3	2642
Exchange Oil Co., Umsted 3, 4-16-15	180	2364
UNION COUNTY—		
Rovinger Oil Corp.,McCain 1, 4-17-14	30	2834
Sunny Jim Oil Co., Flenniken 4, 9-16-15	¶10	2700

LOUISIANA

BOSSIER PARISH—		
The Texas Co.,Caplis 14, 24-16-12..	40	1551
CADDO PARISH—		
Bayou State Oil Co., Hoss 29,24-22-15	15	1054
Double I Oil Co., Spell 10, 15-21-15	4	1714
B. A. Hardy Tr., Glassell 1, 27-18-16	¶12	895
Standard Oil Co., Hart 12, 34-21-16	55	1827
DE SOTO PARISH—		
Texas Co., Wemple A-12, 2-12-12 ..	26	2433
LA SALLE PARISH—		
A. E. Hudson, Urania 5, 7-10-2e ..	75	1524
OUACHITA PARISH—		
Louisiana Dev. Co., Fee 39, 1-19-4e	¶15½	2186
SABINE PARISH—		
Ark Fuel Oil Co., Logan 7, 33-10-12	315	3238

SOUTH LOUISIANA

VINTON—		
Marrs McLean, G & N. G. 1 (wo)	30	1750
Vinton Pet. Co., Vincent 19	35	2900
EDGERLY—		
Gulf, Higgins 8 "B" (wo)	25	3100
Bright-Penn	*	4000
EVANGELINE—		
Texas Co., Latrielle 102 (wo)	*	1800
Jennings Pet. Co., Eunice Crowley 1	*	2310
LOCKPORT—		
Vacuum-Gulf, G. W. Farquahar et al 1, (wo)	75	4300
Bayou D'Inde "State"	900	4290

EAST TEXAS

HARRISON COUNTY—		
State Line O. & G. Co., Abney Est. 2, T D. Wison HRS, ...	¶14	1910
Bryson 3, T. D. Wilson HRS . ..¶20½		1905
PANOLA COUNTY		
Magnolia Pet. Co., Lewis 3, Jas. Johnson HRS	16	1994

TEXAS GULF COAST

SPINDLE TOP—		
The Sun Company, McLean 10 (wo)	3800	4950
GOOSE CREEK—		
Gulf Coast Oil Corp., Gaillard 35 (wo)	*	2050
HULL—		
Empire, Barngrover 25	500	3150
Big Dome Interests, Palmer 1	*	800
PIERCE JUNCTION—		
H. R. Cullen et al, Howe 8	60	4650
BIG CREEK—		
The Texas Company's Wheat 1	*	3800
SOUTH LIBERTY—		
Gulf, H. E. Marshall Fee 2	21	3750

TEXAS

ARCHER COUNTY

Company, Well and Location	Initial Production Bbls.	Depth
Atlantic Oil Prod. Co., Wilson 2-D..	55	1544
Wilson 3-D	160	1544
Bridwell-Heydrick, Cowan 1	*	1505
Consolidated Oil Co., Abercrombie-Taylor 1	30	1389
Graham et al, Edwards 1	*	1585
Gulf Prod. Co., L. F. Wilson 3.....	140	1540
P. F. Gwynn & Roxana, Ward 1....	60	937
Jeffers & Jeffers, Jackson 1	*	1600
Pandem Oil Corp., Thomas 1-B....	*	1400
Ray-Massie et al, Wilson 1-A.....	*	1585
Roxana & Sun Oil Co., Farmer 1..	*	1604
BROWN COUNTY		
Andersen et al, Bowden 1	*	1403
Barbara Oil Co., Willis 6.....	*	1390
Chas. Bell et al, Garnett 1	*	1710
Geo. A. Henshaw et al, Caldwell 1..	*	881
J. K. Hughes Dev. Co., Shore 14..	600	1279
Shore 21	590	1313
Humphreys Bros. et al, Bell 1.....	*	2275
McCarty Oil Co. et al, Shore 15....	300	1327
Shore 16	200	1329
Ryan et al, Brooks 3 .....¶1½		855
Selby Oil & Gas Co., Ellis 2.....	385	1327
Sinclair O. & G. Co., Shore 4.....	555	1317
Shore 7	600	1311
The Texas Co., Byler 2	135	1302
R. M. Lowe 55	100	1255
Jack Ward & Lester, Byler 1	50	1322
Wentz Oil Corp., Shore 7	75	1335
Shore 18	165	1331
Shore 19	250	1329
CARSON COUNTY		
American Ref. Co., Burnett 6.....	300	3108
Marsten Oil Co., Bryan 2	120	3205
McMan O. & G. Co., Bryan 8....	165	3200
Roxana Pet. Corp., Garner 3, shot..	560	3136
COLEMAN COUNTY		
Brown & Co., Powell 2	*	1509
CLAY COUNTY		
Cove O. & G. Co., Johnson 1.....	*	890
Lone Star Gas Co., Miller 15.....	¶¼	1605
Seabury et al, Cozart 1	*	1000
Stumpf & Co., Boddy 2	*	1301
COOKE COUNTY		
Homer Chapman & C. C. Lanier, Montgomery 3	110	1321
Oil Operators Trust, Kleiss 5.....	200	1599
Sun Oil Co., Hooker-Crawford 1....	110	1755
CRANE COUNTY		
Geo. Church & Bert Weekly, University 2, shot	560	2962
Carl Cromwell & Pickrell, University 5, shot	825	2955
Gulf Prod. Co., J. T. McElroy 11, shot	690	2910
J. T. McElroy 12 4100		2840
ELECTRA		
Red River Oil Co., Bywaters 5....	80	1799
The Texas Co., Waggoner 329....	*	2252
Texas Co. et al, Waggoner 3	25	1284
EASTLAND COUNTY		
Associated Pet. Co., Luse 1.....	†	3350
Lewis et al, Holcomb 1	¶3	1584
GRAY COUNTY		
Pure Oil Co., H. M. Davis 6.....	200	3079
Wilcox O. & G. Co., Worley-Reynolds 27	125	2991
HOWARD COUNTY		
F-H-E Oil Co., Roberts 1	45	1864
Godley O. & G. Co., A. J. Hooks 1, shot	100	1844
HUTCHINSON COUNTY		
Derby Oil Co. et al, Johnson 2-A, shot	400	2960
Johnson 4-A, shot	175	2950
First National Oil Co., Cockrell 1	150	3088
Herrogan Oil Co., Cockrell 2, shot..	200	3059
McIlroy Oil Co., Cockrell 10.....1250		3050
Mid-West Explo. Co., Whittenburg-Wilson 2, shot twice	75	2883
Mudge Oil Co., Cockrell 2, shot twice	10	3060
Phillips Pet. Co., Johnson-Cruso 1..	10	2850
Whittenburg-Elra 11, shot	100	2860
Whittenburg-Patsburg 9, shot	50	2927
Whittenburg-Patsburg 11, shot ...	200	2890
Whittenburg-Patsburg 13, shot ...	150	2897
Whittenburg-Patton 18, shot	10	2933
Whittenburg-Patton 19, shot	250	2950
Whittenburg-Patton 21, shot	35	2925
Whittenburg-Tinnie 7, shot	60	2771
Whittenburg-Tinnie 9, shot	150	2877
Prairie & Phillips Pet. Co., Johnson 64-A	100	3014
Johnson 67-A	45	2865

Company, Well and Location	Initial Production Bbls.	Depth
Relief Oil Co., Smith 3-A	20	2808
H. Riley-Hill et al, Cockrell 1, shot	25	2988
Sullivan Oil Co., Cockrell 1	25	2888
Summitt Oil & Ref. Co., Whittenburg 4, shot	30	3026
Sunburst Oil Co., Smith 3, shot	480	3040
Triangle Oil Co., Smith 6, shot.....	120	2729
HARDEMAN COUNTY		
Murchison Oil Co., Mayfield 1	*	2500
JACK COUNTY		
Brentmoor, Inc., Roach 1	3	526
K-M-A AND IOWA PARK		
Archer Oil Co. et al, Barton 1....	*	1825
Panhandle Ref. Co., Daume 1.....	20	1830
Shappell Oil Co., K&K 8.....	25	1630
Wolfe & Son, Nitschke 2	*	1850
MEXIA		
Magnolia Pet. Co., J. R. Stroud 4..	*	3320
MITCHELL COUNTY		
Magnolia Pet. Co., C. M. Adams 8..	70	3064
MONTAGUE COUNTY		
Dale Oil Corp., Adams 1	*	2402
The Texas Co., Gist 5-B	45	908
Woods-Benton-Lesh-McCall, Cunningham 1	15	947
PECOS COUNTY		
Mid-Kansas & Transcontinental, Smith-Taylor 1 3580		1271
SHACKELFORD COUNTY		
Harry Gwinnup et al, Green 1	*	1745
Lee & Dingee, Myer 1-B	70	1035
Milham Corp., Moore 4	220	4360
Roeser-Pendleton, Inc., Reynolds 25	20	1239
Rose et al, Moberly 4	110	1372
SOUTH VERNON DISTRICT		
Murchison Oil Co., Waggoner 2-B..	25	2019
Phillips Pet. Co., Waggoner 16-A..	100	2594
Waggoner 7-HH	155	2580
Waggoner 20-QQ	*	2512
THROCKMORTON COUNTY		
Cranfill-Reynolds, Lee 2	*	633
Hickman-Heydrick et al, Upshur County 1	*	1335
UPTON COUNTY		
Dixie Oil Co., Burleson 25	960	2035
Huble O. & R. Co., Ricker et al 5..	850	2268
The Texas Co., Perry 1	355	2040
T P Coal & Oil Co., Lane 9-A....	150	2070
WINKLER COUNTY		
Independent O. & G. Co., Hendricks 1	90	3095
YOUNG COUNTY		
Boller et al, Gragg 3	80	777
Madden-Hunt et al, Perkins 1	*	855
J. J. Moran et al, Gragg 1.....	20	803
Panhandle Ref. Co., Mathews 8....	15	738
E. L. Smith et al, Thomas 1.....	*	902
Shonquist Drilling Co., Burnett 1	¶3-90	3992

Shell Has New Line

The Shell Company of California has completed a pipe line from Alamitos Heights producing area to its main trunk line at Signal Hill. The line is being used to transport crude oil from Paul Getty's wells on the Cleaver lease, for which the Shell Company has closed a contract. Shell has quite a bit of heavy oil production shut in in other Los Angeles Basin areas, but is consuming the Getty production through its refineries for the recovery of around 26 per cent gasoline.

R. C. Baker, president of the Baker Casing Shoe Company, California, T. Sutter, sales manager of the same organization, R. G. Garretson, and R. C. Baker, Jr., were in Houston recently, on a tour of the Coastal fields, making a survey of business conditions. The party was accompanied by P. V. McGivern of the B. & A. Specialty Company, Tulsa, which firm represents Baker Casing Shoe Company in the Mid-Continent.

How Much Toll

Does Your Company Pay Yearly To Decay

RECORDS show that 50% of all poles and piles, and 15% of all lumber and dimension material produced are used up in replacing that which has been destroyed by decay, termites, etc.

Did you ever stop and figure out just what wood decay is costing your company each year? You will be astonished.

The annual toll paid by the oil industry on account of decay and the loss of tensile strength by untreated wood runs into six figures, the major portion of which represents sheer waste.

Stop your company's losses from decay during the years to come by adopting now the policy of using "Black Beauty" Creosoted Material for all replacements and all new construction.

Endowed by Nature with great tensile strength, this select Southern Yellow Pine is scientifically creosoted, full length, by the vacuum-pressure method. Deep and uniform penetration of the creosote oil into the pores of the sapwood renders the wood chemically inert and toxic to decay-producing bacteria, termites, fungi and other destroyers of untreated wood.

Unharmed by the forces which weaken and cause decay, "Black Beauty" Creosoted Material retains its great strength, year after year. It requires no paint or attention whatever after installation, and its minimum service life, under the most severe conditions is estimated to be at least forty years.

You can safely use "Black Beauty" Creosoted Material in every place that you can use untreated wood. There is no increase in fire hazard.

Quit paying toll to decay. "Black Beauty" Creosoted Material has practically 100% salvage value; and its use for derricks, tank and building foundations, valve boxes, bridges, culverts, approaches, revetments, telephone and power line poles, car-loading racks, wharves, piers, etc., is one of the best investments any company can make. It provides durability at the lowest possible per-annum cost.

"BLACK BEAUTY" 2T7 CREOSOTED MATERIALS

Let us quote on your needs.

TEXAS CREOSOTING CO.
Main Office and Plant:
Orange, Texas, U. S. A.

The Annual Cost Is Far Lower Than Untreated Materials

Say you saw it in The OIL WEEKLY

WILDCATS FROM ALL SECTIONS

MOUNTAIN STATES

WYOMING

Completions

Company, Well and Location	Initial Production Bbls.	Depth
CARBON COUNTY—		
Mike Lundy et al, 1, 34-20n-78w...	*	4180
Armstrong Oil Co., 1, 35-25-88	*	2654
NATRONA COUNTY—		
Meabon et al, 1, 16-40n-79w	*	2305
M. P. Wheeler 1, 13-33-80w	*	1330
John J. Durst 1, 18-40-78	*	505
NIOBRARA COUNTY—		
Wyo. Ill. Pet., 1, 7-35n-65w	*	....
H. E. Briggs, 2, 2-39n-61w	*	200

BIG HORN COUNTY—Utah-Southern Oil Co.'s 1, 29-56n-97w, sdtr 190 ft of 10-inch, td 2000 ft. J. E. Scanlon's Torchlight 1, 25-51n-93w, sd. Alivazakee & Slagle's Torchlight 1, 25-51n-93w, testing water at 440 ft.

CARBON COUNTY—Frank E. Kistler & Co.'s Separation Flats structure 1, 35-25n-88w, core dr at 480 ft, this is one of 3 similar tests on this structure. A. A. Akers' 1, 24-22n-80w, dr at 350 ft, carrying 8-inch. Lake Valley Oil Co.'s Eight Mile Lake 1, 14-20n-88w, resuming at 4915 ft. Producers & Refiners Corp.'s Wyana 1, 25-26-88, dr at 3091 ft.

CONVERSE COUNTY—Criterion Oil Co.'s Irvine 1, 5-31n-70w, dr at 3227 ft with Baker core barrel.

CROOK COUNTY—Osage Trust Co.'s Arch Creek 2, 29-49n-64w, dr at 1520 ft. L. Fletcher et al's, sw 5-55n-57w, lcn for deep test.

FREMONT COUNTY—Iowa-Wyoming Investment Co.'s Megowan 1, trying for water shutoff. Producers & Refiners Corp.'s Muskrat 1, 34-34-92, rig.

HOT SPRINGS COUNTY—MacPherson Oil Co.'s 1, 2-44n-96w, cleaning hole to test showing. Producers & Refiners Corp.'s Murphy Dome 1, 8-43-911, dr by bit 3013 ft.

JOHNSON COUNTY—Carter Oil Co.'s Rider 2, se 17-48-82, sdtr cas at 3850 ft, td 4398 ft. Fairway Oil Co.'s Crazy Woman 1, ne 7-47n-82w, dr below 1450 ft. Tarrant Synd.'s Steel Creek 2, 17-46n-82w, fsh at 3443 ft.

LINCOLN COUNTY — Cumberland Dome Oil Co.'s 2, 32-19n-116w, dr resumed 2100 ft. Pacific Properties Corp.'s Fossil 1, se 15-21n-117w, sd 1595 ft.

NIOBRARA COUNTY — Buck Creek Oil Co.'s Ant Hills Anticline 1, dr below 170 ft. Platte River Drlg. Association's Guernsey 1, 12-26n-67w, cas trouble at 2300 ft. Wellington Oil Co.'s Bear Creek 1, nw 18-25-98w, sd account bad roads.

PLATTE COUNTY—A. E. Jacobs et al's Grayrocks 1, 13-25n-66w, resuming at 1488 ft.

PARK COUNTY—Ohio Oil Co.'s Guiterman 1, sw 21-53-101, hauling material. Producers & Refiners Corp.'s Pitchfork 1, ne 14-48-102w, hauling material.

SWEETWATER COUNTY—Sand Hills Oil Co.'s Lost Soldier 5, 3-26n-90w, dr resumed at 3345 ft.

WESTON COUNTY—Reserve Oil Co.'s Fiddler Creek 1, 11-45-64w, sd at 3245 ft.

WASHAKIE COUNTY—Carter Oil Co.'s Nowood Dome 1, sw 5-48-90, fsh for bailer.

COLORADO

MONTEZUMA COUNTY—Ralph R. Burke, Ute 3, tract F, Ute Indian Res., twp 32, range 18w, prod from 2 strata, one at 380 ft and one at 624-54 ft, 144 bbls per day.

BOULDER COUNTY—Left Hand Oil Co.'s Prechtl 1, 34-3n-70, co, testing, td 1940 ft; Trevarton 1, ne 2-2n-70, spd.

LAPLATA COUNTY—Miley's Hutchinson 1, 32-33-12, dr 3227 ft, td 3257 ft. E. M. Klem's Ferguson 1, 12-34-7, sd 1240 ft, waiting for 6¼ inch.

LAS ANIMAS COUNTY—Mountain States Gasoline Co.'s Sandoval 3, 3-34-62, spd.

LOGAN COUNTY — Northeastern Colorado Oil Co.'s State 1, 36-8-55, trying to free 8¼-inch to lower from 3378 ft to bottom at 3390 ft.

PUEBLO COUNTY—Boone Oil & Gas Co.'s Ritter 1, 33-18-60, dr 2500 ft.

ROUTT COUNTY—Ohio Oil Co.'s Kuykendall 1, se 22-21n-11w, rigging. Morrison & Johnson's Hitchins 1, 31-7-85, resuming at 1538 ft.

MOFFAT COUNTY—Marland's Clark 1, 21-3-91, loosening 6¼-inch cas to dr deeper from 2157 ft; Wymore 9-A, 16-3-91, spd at 90 ft.

NEW MEXICO

CURRY COUNTY—W. D. Weathers et al's Weathers 1, 7-25-24, dr below 1135 ft. Hasson Pet. Co.'s Laird 1, sec 22-8-36, spd and sd.

DEBACA COUNTY—McAdoo Pet. Co.'s State 1, 16-1-27, dr at 2535 ft.

McKINLEY COUNTY—H. L. Williams 1, 30-18-8, dr below 700 ft. Producers & Refiners Corp.'s 1, Hospah structure, 25-18-9, spd. Childers Drilling Co.'s 2, 19-18-10, sd 300 ft. Midwest Refining Co.'s Hancock L, 1-17-9, dr 1738 ft; 24, 2-17-19, dr 1270 ft. Pittsburgh Development Co.'s Cathedral Rocks 1, 30-20-19, dr 3245 ft; 19-17-9, lcn; twp 20, range 9, lcn. Inland Oil Corp.'s 1, nw 22-18-10, rig. Smart & Reid's 1, 7-17-9, bldg rig.

SAN JUAN COUNTY—Mid-Continent's Ranson 1, 22-29-11, dr 200 ft. San Juan et. Co.'s Palmer 1, 17-29-13, making water shut-off 1290 ft. R. M. Smith's James 2, 23-29-11, ready to spd. Craft-Wiley's Shuetz 1, 15-29-11, dr below 600 ft. Kane Bros.' Finch 1, 15-29-11, rigging. Huerfano Pet. Corp.'s 1, 25-29-11, spd. Union Oil & Mining Co.'s Pine 2, 8-29-9, fsh job compl. Senate Oil Co.'s Garland 1, 34-29-11, dr 1765 ft. T. N. C. Oil Co.'s Lanier 1, 9-29-11, ur to lower 8¼-inch 636 ft. Kansas-Colorado Oil Co.'s Atterberry 1, 24-31-11, erecting standard rig to dr deeper from 1350 ft. Portage Oil & Gas Co.'s Glade 1, 24-30-13, dr deeper from 2160 ft.

TORRANCE COUNTY—San Juan Oil & Gas Co.'s Minerman 1, 32-7-10, moving material to resume at 2330 ft; Randall 2, 20-6-10, making repairs at 3460 ft. F. G. Wilson Trustee's Pace 1, 12-6-7, wtg for cas at 1550 ft.

QUAY COUNTY—Midwest Refining Co.'s Rhodes 1, 30-8n-31, dr 1738 ft. Ohio Oil Co.'s Tucumcari 1, 24-7-29, fsh for parted pipe at 1536 ft.

UNION COUNTY—Sun State Pet. Co.'s Paso Monte 1, 14-24-30, dr below 3965 ft.

VALENCIA COUNTY — Acme Oil Co.'s New Mexico-Arizona Land Co. 1, 26-6-3, dr below 1900 ft.

UTAH

GRAND COUNTY—Midwest Refining Co.'s Prommel 1, 5-27-21, dr at 2355 ft. Embar Oil Co.'s Big Six 1, 34-25-21, dr below 3795 ft. Empire Gas & Fuel Co.'s Kimball 1, 6-20-21, set 6⅝-inch 3553 ft.

SAN JUAN COUNTY—Utah Southern Oil Co.'s Noble 1, 28-40-18, dr 2855 ft; Canyon 1, 28-41-19, recementing. Boulder Knoll Oil & Gas Co.'s 1, sd 1950 ft. Utah Petroleum Co.'s Geoghegan 1, 1-30-20, sd 1640 ft. Francis Oil-Utah Pet.'s Francis 1, 36-41-17, wtg for cement to set 1700 ft. Union of Calif.'s Lisbon 1, re-dr 300 ft.

OKLAHOMA

BRYAN COUNTY—Magnolia's Horace 1, nw sw nw 26-5-7e, fsh 175 ft.

BECKHAM COUNTY—Sayre's Davis 1, sw nw 24-9-23, dr 200 ft. Nelson's Adams 1, sw ne 35-9-25, fsh 2358 ft. Prince Bros.' 1, c sw nw 5-8-23, rur tools for 3000 ft test.

CANADIAN COUNTY — J. V. Bailey's Robinson 1, c nw ne 1-10-6, sp with rot. Carrol Oil Corp.'s North 1, ne 18-13-10, sd 1500 ft. Spears et al's Piatt 1, se ne 6-14-6, sd 3223 ft.

COMMANCHE COUNTY — Couch et al's Watson 1, ne sw ne 24-2-10, fsh 1765 ft.

CLEVELAND—Cromwell et al's Donovan Donavan 1, c sw 22-10-2, dr 3328 ft. Gault Brown's Alexander 1, c nw 7-9-1, cmt 8 in. 3732ft. Mid-Continent's Woodrow 1, sw nw 20-8-1, fsh 8 in. 4010 ft. Sonner State's Vandeer 1, ne nw sw 15-7-1, 8 in. 2994 ft. Magnolia's Le Feure 1, se sw 11-6-1, fsh 6 in. 3280 ft, td. Wiser's Byrd 1, sw nw 25-6-1,. dr 3980 ft.

CIMMARON COUNTY — Jake Phillips' 1, nw 25-6-2, dr 2900 ft. Sinclair's 1, nw 22-5-2, dr 3025. Ramsey Bros' School 1, se 4-5-6, ur 8 in. 3500 ft. Gladys Belel's Israel 1, sw ne 25-3-7, dr 2680 ft.

DEWEY COUNTY—McCoy et al's Perfect 1, ne 9-18-5, ur 6 in 2672 ft.

GRANT COUNTY—Flannagan et al's Sherrer 1, ne sw 16-26-3, dr 2825 ft. Ray Ostot's Snyder 1, ne ne se 6-28-2w, td 4546 ft, dr by 5 in. Amerada's White 1, nw sw 22-29-3w, top lime 4445, dr 4655 in blk lime.

HARPER COUNTY — Hoffer's Cooper 1, nw se 14-25-22, 5 in 4053 ft, sd.

KAY COUNTY—Ponca Lee's McNeal 1, nw ne 32-26-2, td 2795 ft, sd. Tonkawa Dev. Co.'s McDaniels 1, se 15-25-1, sd 3050 ft. Miller Bros.' Anderson 1, nw se 10-25-1, dr 465 ft. Boucher et al's Sandsyellow, ne nw ne 34-25-2e, 8 in at 2307 ft, dr 2375 ft.

KINGFISHER COUNTY—Ramsey's Pool 1, se 25-17-5, ur 6 in. 3900 ft. Pet. Eng. Core Drlg. Co.'s Campbell 1, c nw se 6-16-7, rig. McKenna et al's Sturgeon 1, nw sw 27-16-6, sd 2115 ft. Gault Brown's Johnson 1, c nw 26-16-5, dr 2910 ft.

LINCOLN COUNTY—Madden & Madden, Pickerall 1, sw c se 20-15-6, dr 540 ft.

LOGAN COUNTY—Roxana's McCullough 1, sw ne se 30-18-4, sand 5808-11, prod 259 bbls, dr 5906 ft. Bryan & Emery's No. 1, nw se 33-19-4, dr 4230 ft. Carter's Rogers 1, sw ne sw cmt 6 in. 5036 ft, tl 555 ft, dr 5592 ft. Brown & Bleven's Lovell 1, sw nw 9-18-4, sd 4515 ft, contract complete. T-P's Jewell 1, nw ne nw 27-18-4, coring 4060 ft; Speak's 1, se nw 33-18-4, coring 4096 ft. Haley's Quair 1, sw se 33-18-3, co 2535 ft. Slick's Berry 1, sw se 28-17-1, ur 5 in 4890 ft, oih; Signs 1, nw se 20-17-1, dr 3500 ft. Bu-Vi-Bar's Kirkpatrick 1, c sw 12-15-1, fsh 3492 ft.

MAJOR COUNTY—Randon's Parker 1, ne nw 4-23-16, sd 1150 ft.

OKLAHOMA COUNTY—Cromwell's Walgren 1, c se 21-14-3, dr 3415 ft. Slick et al's Lufkin 1, c ne se 18-13-3, td 3750 ft, rig down. Cromwell's Stone 1, c sw 28-12-4, dr 4090 ft. Ramsey's Dalton 1, c se ne 28-11-5, dr 1680 ft. Bailey & Ramsey's Gulddoracy 1, c se se 9-11-1, dr 4185 ft. Cromwell's Thompson 1, sw ne ne 15-12-3, rig.

PAWNEE COUNTY—Garber-Pulse-Harts' Moore 1, sw nw 9-22-6, rig and tools. Blackwell's Phyfe 1, ne sw ne 5-20-6, dr 3604 sand, show water. Watchorn's Arkeketa 1, ne sw se 9-22-3e, dr 4268, water.

PAYNE COUNTY—Marland's Lemmon 1, sw nw nw 10-19-1, dr 2730 ft. Gardner's Montgomery 1, se ne sw 30-19-2e, td 4790 ft, run 4 in.

POTTAWATOMIE COUNTY — Wilcox's Hollis 1, sw 22-11-2, sand 3575-3600 ft, set 6 in, hfw; Pickard 1, se sw 32-11-2, dr 2550 ft. Sikes, Kilgore et al's Kline 1, c se se 26-11-4, dr 5562 ft. Shaffer et al's Ives 1, ne se se 12-10-3, sd 3620. McCullough's Scott 1, ne sw 2-9-2, lcn. W. B. Pine's Hamlin 1, ne se se 27-9-4, rog. Mid-Kansas' Brandenburg 1, ne sw sw 34-8-4, td 4097 ft, sd. I. T. I. O's School 1, se sw 16-8-5, Hunton 4080, td 4097 ft, sd. Roxana's Rickers 1, nw nw 22-7-3, dr 3962 ft. Magnolia's School 1, sw se 36-7-3, set 15 in at 1347 ft. Sinclair's Bowers 1, nw se 7-7-5, t Viola 4298 ft, dr 4341 ft, water. Davis et al's McCathy 1, se nw 10-6-2, td 4988 ft, sd.

PONTOTOC COUNTY — Bowles et al's Lewis 1, c se sw 29-5-5, sp and sd. Shaw et al's No. 1, ne sw 33-5-6, show 2085 ft, dr by cas 2085 ft. American Oil Co.'s Wray 1, c s l se se 27-5-6, dr 875 ft; Stringer 1, sw se 28-5-6, 6 in at 2680 ft, stdz; Logsdon 1, c ne sw 35-5-6, dr 1550 ft. La. O&R Co.'s Gilcrease 1, ne nw ne 20-5-8, swab and flow 300 bbls, sand 2442-50, td 2450 ft.

TEXAS COUNTY—Three Way's Price 1, se nw 11-1-18, show gas 2560-2620, sd cas. Con-

WHITLOCK

THE picture will help you visualize the strength of Whitlock Cordage. Those stranded fibers are of pure, 100% selected manila, and all Whitlock Cordage is made with such scientific skill that it wears as a unit, instead of fraying on the outside.

It is never loaded. Only sufficient lubricant is used, and that of the very highest grade, to keep it pliable and serviceable in all weather in any climate. Thus inferior rope, selling for a lower price per pound, often costs actually more than Whitlock because the yardage runs lower.

Frick-Reid Stores stock Whitlock Cordage for every oil country purpose.

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Axelson Machine Co.
Sucker Rods, Pull Rodz, Plunger Working Barrels (Pumps) etc.

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Dreadnaught Rotary Equipment, Water-Cooled Drawworks, Pumping Hoists, Traveling Blocks, etc.

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Power and Steam Pumps.

J. P. Ratigan
Grips, Clamps, Beam Hangers.

Joseph Reid Gas Engine Company
Gas and Oil Engines, two and four-cycle, Band Wheel and Direct Drive Pumping Powers.

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Manila Cordage, Bull Ropes and Cat Lines.

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Valves, Fittings and Tools for Steam, Water, Gas, Oil and Air.

Rossendale Reddaway Belting & Hose Co.
"Camel Hair" Belting, Belt Clamps.

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SUPPLY CO.

Tulsa, Okla., Pittsburgh, Pa.

East of the Mississippi—The Frick & Lindsay Co.

WEST OF THE MISSISSIPPI—STORES EVERYWHERE

nell et al's Tansey 1, se nw 5-1-9, sp and sd. H & H's Hitch 1, ne 26-1-15, dr 460 ft.

TILLMAN COUNTY—Oasis Dr. Co.'s Snelly 1, se 13-1-18, sd 1525 ft. Pearson's Mounts 1, sw 3-5-15, lcn.

WOODWARD COUNTY—Ostot Dev. Co.'s Simmons 1, se 32-24-17, sd 10 in. 1500 ft. Sharon's Elmore 1, sw 25-21-21, sd 2778.

WOODS COUNTY—Sonner State's Marcum 1, c sw 20-27-15, rig up.

KANSAS

Completion

BUTLER COUNTY—
Christy et al, Harris 1, sw se 14-27-7 100 2716

BARBER COUNTY—Vickers et al's Ott 1, sw se 30-32-14, dr 4700 ft.

BARTON COUNTY—Huffin et al's Smith 1, ne se se 17-19-11, fsh 5090 ft. Johnson et al's Craft 1, ne sw sw 9-16-15, dr 3428 ft. Phillip's Biyle 1, c se 25-17-15, caving 3560 ft.

BUTLER COUNTY—Howarth et al's Clayton 1, sw sw 23-25-6, dr 750 ft. Buford et al's Lambert 1, sw se sw 20-25-7, sd 2775 ft hfw. Helmerick & Payne's Doran 1, ne sw 1-29-3, dr 2430 ft.

ELLIS COUNTY—R. E. Day's Robbins 1, sw ne ne 14-14-16, sd 2615 ft. Mid-West's Reidell 1, nw sw se 27-13-16, dr 2735 ft.

GREENWOOD COUNTY—Ward & McGinnis' Furguson 1, sw 27-11, dr 350 ft. Empire's Demler 1, nw ne 25-22-12, spd.

LYON COUNTY—Gashe et al's French 1, ne sw 26-21-12, mach. Parkening et al's Burenweide 1, ne se 30-21-11, spd.

MARION COUNTY—Show Bros.' Williams 1, c ne sw 4-17-4, dr 1269 ft. Frank et al's Buckley 1, se sw 18-19-4, rig.

McPHERSON COUNTY—Laughlin et al's Hanson 1, ne se 22-18-3, dr 2865 ft. Johnson et al's Kuns 1, se nw 12-19-3, dr 3275 ft; Ross 1, se 30-21-5, dr 2690 ft.

SEWARD COUNTY—Wilson et al's Son 1, ne 14-33-33, sd 1519 ft. Vicker's Hitch 1, c sw 33-32-34, dr 3509 ft, hfw.

SEDGEWICK COUNTY—Marland's Schultz 1, nw sw sw 5-28-1, dr 2580 ft.

SUMNER COUNTY—Ray Ostot's Bartlow 1, se se se 22-33-3, sd 1600 ft.

ARKANSAS

Completions

Company, Well and Location	Initial Production Bbls.	Depth
LITTLE RIVER COUNTY—		
Greeson et al, Waldrip 1, 4-13-3- ..	*	1740
MILLER COUNTY—		
W. D. Nash, Priest 1, 26-14-27	*	3850
UNION COUNTY—		
Garrett & Modisette, Union Saw Mill 1, 7-18-13	*	4309

BRADLEY COUNTY—Johnson & Adams, Southern Lbr. Co., 1, 12-12-12, set 6⅝-in at 2200 ft.

CALHOUN COUNTY—Arkansas Natural Gas Co.'s Stout 1, 2-13-14, set 12¼-in at 411 ft.

CLARK COUNTY—Wheelen Oil Co.'s Barrow 1, 35-10-20, sd 2350 ft.

COLUMBIA COUNTY—Atlantic Oil Producing Co.'s Couch 1, 23-17-20, coring 2701 ft. Columbia Synd.'s Whitehead 1, 14-19-23, sd 2350 ft. Colquitt & Thomas Duffer 1, 23-18-19, dr 2530 ft. Haynes et al's Runyan 1, 3-16-21, sd 525 ft. Lion O. & R. Co.'s Pattie 1, 20-18-19, rig. Mitchell et al's Franks 1, 25-19-22, sd 150 ft. Mitchell & Isles' Bodcaw 2, 4-20-21, dr 2392 ft. Mair et al's Gantt 1, 15-17-22 dk. Scott Phillips' Davis L. & I. Co. 2, 6-18-20, sd 2145 ft. Wingfield et al's Bodcaw 1, 4-20-21, sd 2025 ft.

DREW COUNTY—McClintock et al's Ogle 1, 35-3-5, sd 2550 ft.

GRANT COUNTY—Jones et al's Meeks 1, 5-4-11, sd 400 ft.

HEMPSTEAD COUNTY—Arkansas Natural Gas Co.'s Goodlet 1, 34-10-26, dr 1736 ft. Burton et al's Garland 1, 23-10-25, sd 2210 ft.

LA FAYETTE COUNTY—Ken-Saw Pet. Co.'s Red River Lbr. Co. 2, 5-20-24, sd 2840 ft.

LINCOLN COUNTY—Pine Prairie Oil & Gas Co.'s Carter 1, 33-10-5, sd 647 ft.

LITTLE RIVER COUNTY—Grote et al's Allen 1, 2-13-31, sd 2941 ft. Johnson et al's Hawkins 1, 10-11-31, sd 1594 ft.

MILLER COUNTY—Lenze et al's Dale 2, 28-15-26, dr 3150 ft.

NEVADA COUNTY—Fruen et al's Rhodes 1, 22-12-21,set 10-in at 60 ft. Greeson et al's Grove A-1, 12-14-21, set 6-in at 1148 ft. Holmes et al's Wallace 1, 11-14-21, sd 1200 ft. Ozan Oil Co.'s Ellis 6, 2-14-21, wosr 1155 ft. J. J. Obrien's Moss 1, 1-14-21, set 6-in at 1140 ft.

OUACHITA COUNTY—F. A. Book Tr.'s Johnette 3, 33-15-16, coring 2245 ft. Copenhagen et al's Berg 3, 13-15-17, sd 2193 ft. J. E. Grosby's Berry 12, 33-15-15, milling 2213 ft. Exchange Oil Co.'s Berg 2, 4-16-15, arr to plug back at 2352 ft; Berg 3, 4-16-15, cemented back to 1900 ft; Berg 4, 4-16-15, arr to test 2395 ft; Berg 6, 4-16-15, wosr 2368 ft; Berg 7, 4-16-15, set 12½-in at 184 ft; Berg 8, 4-16-15, dk. A. T. Grayson's Reynolds 1, 21-14-17, sd 1744 ft. Humble O & R. Co.'s Jenkins 1, 15-14-19, set 10-in at 99 ft. Middlesex Oil Corpn's Shirley 5, 26-15-17, wosr 2305 ft. Magnolia Pet. Co.'s Morgan 1, 7-15-19, dr 2500 ft; Stout B-1, 28-14-16, set 13⅜-in at 758 ft. L. D. Reynold's Chandler 1, 3-14-17, arr to abd 1900 ft. Sutton's Schoolhouse 2, 28-15-16, sd 3060 ft. The Texas Co.'s Spohr 1, 35-15-16, set 10-in at 58 ft. Unity Pet. Co.'s Umsted A-8, 33-15-15, drilling out cement at 2260 ft.

UNION COUNTY—C. H. Allison's Howard 1, 8-19-15, set 10-in at 183 ft. Brown et al's Slaughter 1, 2-17-16, sd 2296 ft. Bondurant et al's Garner 1, 8-18-22, sd 2635 ft. G. J. Child's Fee B-2, 8-16-16, set 6-in at 2260 ft. Crescent Oil Co.'s Saxon 1, 5-16-16, sd 53 ft. W. H. Gilliland's Hodges B-1, 1-16-17, sd 2565 ft. Gulf Ref. Co.'s Murphy 45, 4-16-15, dk. Humble O. & R. Co.'s Flenniken B-2, 9-16-15, testing 2776 ft; Pate 10, 10-16-15, wosr 2383 ft Imperial O. & G. Co.'s Murphy 5, 9-16-15, fsh 2565 ft; Goodwin 1, 22-17-15, sd 3118 ft. E. M. Jones' Lawton A-2, 10-16-15, set 12½-in at 205 ft; Murphy 10, 17-16-15, dk; Keene & Wolfe's Murphy 6, 9-16-15, dk. Lyall et al's Stegall 1, 11-17-13, sd 47 ft. Magnolia Pet. Co.'s Crawford 3, 8-16-16 dk; Laney 3, 8-16-16, dk; Laney 4, 8-16-16, Murphy 3, 8-16-15, dk; Murphy 9, 8-16-15, set 6⅝-in at 2718 ft; Wilson 6, 17-16-15, dr 2830 ft; Wilson 7, 17-16-15 dk; Union Lbr. Co. 1, 21-16-16, set 8⅛-in at 2655 ft. Mounta et al's Pratt 6, 6-18-15, dr 2110 ft. Murdock et al's Vestal 1, 17-16-15, sd 2813 ft. Marine Oil Co.'s Winn Est 1, 11-18-13, set 6-in at 2706 ft. National Consolidated Pet. Co.'s W. A. Fagg 1, 8-16-16, sd 2320 ft; Fagg 2, 8-16-16, wosr 2647 ft. Natural Gas & Fuel Corpn's Murphy F-5, 9-16-15, coring 2814 ft; Murphy E-3, 9-16-15. set 6⅝-in at 2388 ft. J. J. Obrien's Saxon 1, 16-16-16, wosr 2170 ft. Ohio Oil Co.'s Crain 1, 1-17-14, set 4¼-in at 3000 ft; Murphy 5, 9-16-15, set 4¼-in at 2686 ft. Rovenger Oil Corpn's Harrell 4, 15-17-16, dk. S. Richardson's Lawton 5, 10-16-15, tested sw at 2739 ft Rice et al's Newton 1, 13-17-16, sd 2260 ft. Southern Crude Oil Purchasing Co.'s Wells A-5, 15-16-15, fsh 2640 ft. Sun Oil Co.'s Hays 3, 3-16-15, arr to cement back to 2293 ft; Thompson 1, 10-18-13, set 6-in at 2643 ft. Unity Pet. Co.'s Roper 15, 3-16-15, dk. L. M. Vaughn Tr's Ezell 1, 12-17-15, wosr 2153 ft. Wingfield et al's Greer 1, 5-19-13, dk.

LOUISIANA

Completions

Company, Well and Location	Initial Production Bbls.	Depth
BIENVILLE PARISH—		
S. F. Borden, L. & A. 2, 9-15-7 ..	*	3645
CADDO PARISH—		
Gilliam Synd., Sellington 1, 17-21-14	*	2732
Bahan & Bahan's Wilburn 2, 4-17-16	*	2743
Owl Oil Co., Florsheim 4, 9-17-16 ..	*	1263
CLAIBORNE PARISH—		
Mitchell et al's Wilborn 1, 23-19-7..	*	3105
LA SALLE PARISH—		
Tunica Petroleum Co., Hardtner 1, 8-7-2e	*	801
SABINE PARISH—		
Lewis Clark Pet. Co., Wyatt Lbr. Co. 1, 23-5-12	*	4520
WINN PARISH—		
Greer & Gault's Bodcaw 2, 9-11-4w	*	50

BIENVILLE PARISH—B. J. Forest's Perrit 1, 11-17-16, dr 80 ft. W. E. Hick's Hodge Lbr. Co. 1, 21-16-5w, dk. Kimbrough et al's Cargyle 1, 27-15-18, dr 1565 ft Tunica Pet. Co.'s L. & A. 30, 34-16-7, set 10-in at 60 ft.

BOSSIER PARISH—Doern et al's Thomas 1, 9-12-11, sd 2765 ft. Estes et al's Bodcaw 1, 15-23-12, dr 2735 ft. Glassell et al's Tiguer-Gibson 1, 14-21-12, tested dry at 2544 ft. Humble O. & R. Co.'s B. & W. 30, 15-19-11, dr 2351 ft. Magnolia Pet. Co.'s Dodson 1, 15-23-12, set 8⅝-in at 3084 ft Palmer Corpn's Bossier L. & L. Co. 4, 9-16-11, set 6-in at 4150 ft. Ramsey et al's Dodson Est. 1, 16-23-12, fsh 2845 ft; Robertson 1, 22-23-12 coring 3392 ft. Sligo Synd.'s Jeter 1, 23-17-12, dr 3350 ft. C. O. Tate's Dodson 1. 15-23-12, sd 240 ft. Tubbs et al's Jacobs 1, 26-20-13, fsh 3395 ft.

CADDO PARISH—Askew et al's Elliott 1, 12-19-16, dr 2400 ft. Arkansas Fuel Oil Co.'s Gayle 8, 30-16-12, tested ¶1½ gas at 1979 ft. Bahan et al's 4-17-16, swabbing 27-3 ft J. R. Bahan's Stringfellow 3, 19-17-16, rig; Abney 1, 9-17-16, set 10-in at 41 ft. Bayou State Oil Co.'s Hoss 30, 24-22-15, dk. Bethany O. & G. Offenhauser 1, 1-20-16, sd 2225 ft. J. W. Burton's Bunker & Thompson 16, 18-21-15, arr to abd 1056 ft. W. D. Chew's Fee 6, 33-21-16, dr 1850 ft. Dixie Oil Co.'s Robertshaw 88, 13-21-15, set 6-in at 1548 ft; Slattery 10, 27-21-15, sd 3877 ft. Noel A-2, 13-21-15, recemented 6-in at 3842 ft; Simmons 8, 14-21-15, dr 2540 ft; Mabry B-5, 14-21-15, set 15½-in at 240 ft Dobson et al's Rives 5, 5-20-16, dr 1820 ft. Empire Gas & Fuel Co.'s Levee Board B-1, 36-21-16, set 6 in. at 1351 ft. J. B. Files Payne 1, 32-23-16, sd 925 ft. Falcon Drlg. Co.'s Schmidt 1, 27-20-15, set 10 in. at 42 ft. Gilliam Synd.'s Taylor 1, 17-21-14, running sand pump at 914 ft Gulf Ref. Co.'s Ferry Lake 269 29-20-16, set 6⅝ in. at 2150 ft; Tyson 13, 14-21-15, dr 3434 ft; Wemple 5, 14-20-15, wosr 2214 ft; B. A. Hardy's Agurs 2, 6-16-16, set 10 in. at 195 ft; Trosper 1, 35-18-16, set 12 in. at 107 ft; Wheeler 1, 16-18-16, dr 100 ft; Haynes Bros.'s Murray 1, 14-21-15, set 8⅝ in. at 3592 ft. Lewis Oil Corp.'s Raines 18, 22-21-15, dr 1270 ft. Luby Oil Co.'s Levee Board 15, 23-22-15, wosr 1047 ft. Caddo L. B. 16, 23-22-15, set 10 in. at 40 ft Magnolia Pet. Co.'s Bell 4, 4-17-16, 940 ft. Caddo L. B. 2, 8-20-15, dr plug 2910 ft; Eillon 16, 24-21-15, tested show oil at 1750 ft; Dillon 18, 24-21-15, dk; Dillon 21, 23-21-15, lcn; Caldwell 4, 24-21-15, set 6 in. at 1390 ft; Robertshaw 20, 23-21-15, blg 3659 ft; Robertshaw 21, 23-21-15, lcn; Marshall Natural Gas Co.'s Sharp 1, 22-18-18, 8 in. cas collapsed at 1300 ft. Ohio Oil Co.'s Aaron Burr Lbr. Co. 1, 32-23-16, sd 1553 ft; Smith 25, 12-21-15, dr 3180 ft. Owl Oil Co.'s Wilburn 3, 4-17-16, lcn. Shreveport Oil Corpn's State 1, 28-21-16, dk; State 2, 27-21-15 arr to make test at 1860 ft Simplex Oil Co.'s Schmidt 2, 15-20-15, rig; Thomas 3, 15-20-15, set 10 in. at 87 ft. Standard Oil Co.'s Hart 13, 34-21-16, set 8 in. at 1808 ft; Hart 14, 34-21-16, dr 1260 ft; Stiles 186, 33-21-16, dk. The Texas Co.'s C. M. L. Co. 47, 23-21-15, cleaning out 3540 ft; Curtis 7, 14-20-15, wosr 2213 ft; Noel B-13, 14-21-15, ¶10 gas at 3035 ft. Tholl Oil Co.'s Muslow 3, 31-21-15, wosr 1670 ft. Tubbs et al's Hines 1, 9-14-16. rig.

CALDWELL PARISH—Grayson Oil Co.'s Crockett 1, 6-12-4, set 10 in. at 100 ft. Southern Crude Oil Purchasing Co.'s Caldwell L. & T. Co. 8, 5-13-5e, sd 147 ft.

CATAHOULA PARISH — S. D. Hunter's Tensas Delta 2, 21-9n-7e, rig. Lochnager O. & G. Co.'s Beasley 1, 26-9n-6e, 3093 ft.

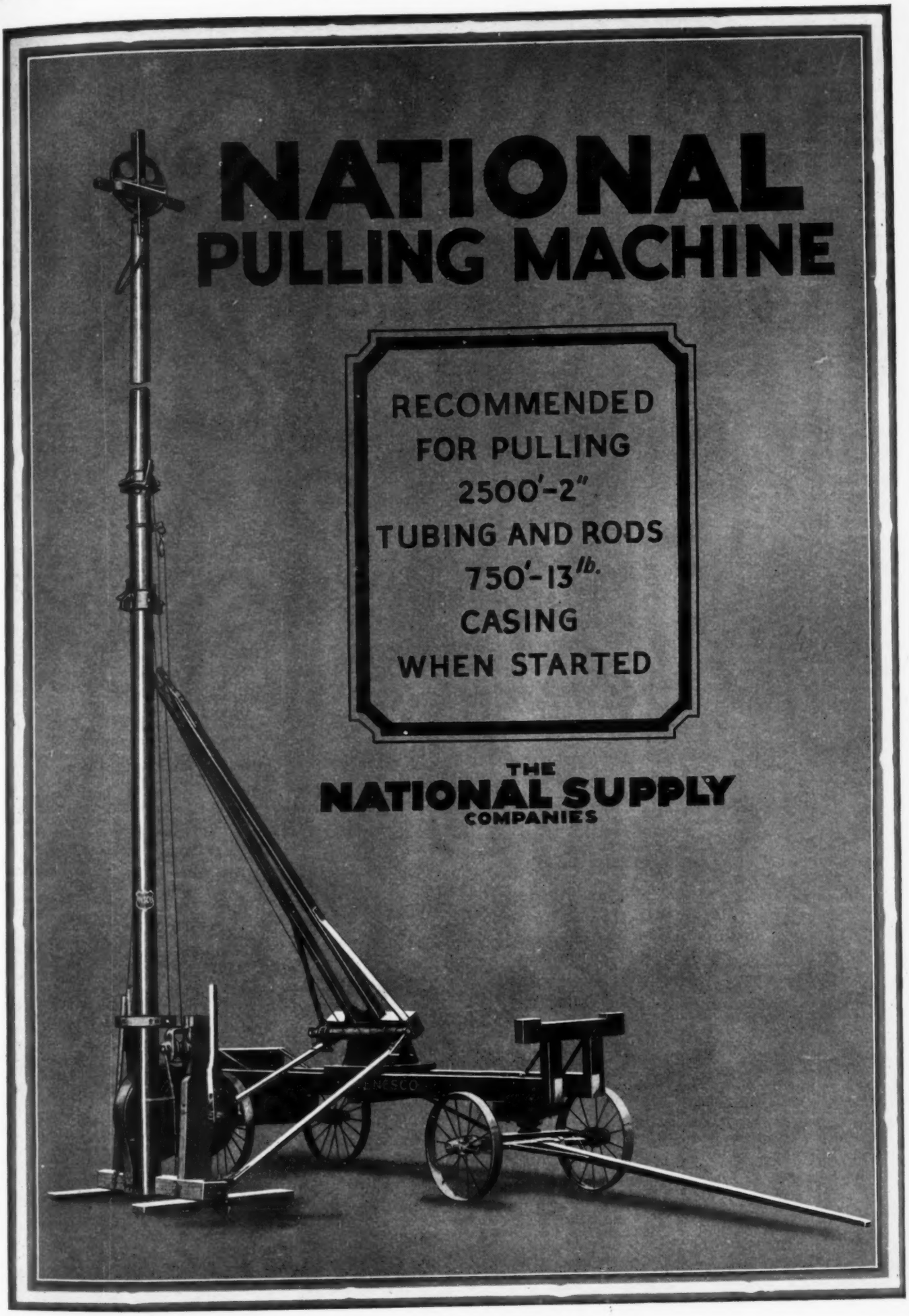
CLAIBORNE PARISH—Magnolia Pet. Co.'s Lee 1, 16-22-8, sd 3652 ft. Tate et al's Maddox 1, 21-23-7, dr 2350 ft.

DE SOTO PARISH—Berry & LeGrande's Girque 1, 3-10-11, dk. Dixie Oil Co.'s Jenkins 1, 9-12-11, fsh 5283 ft. Helm & Jarman's Joyner 1, 28-11-12, sd 3018 ft. Hoosier Oil Co.'s Lanier 2, 5-11-11, lcn; C. J. Lanier 1, 5-11-11, lcn. Magnolia Pet. Co.'s Logan 1, 17-10-12, coring 3109 ft. Reliance Drlg. Co.'s Jones 1, 8-11-14, coring 1984 ft. W. M. Sebastian Synd.'s Sebastian 1, 11-10-15, dr 3405 ft. Seip et al's Robertson 1, 18-10-12, dr 1972 ft The Texas Co.'s Sample C-15, 36-13-12, sd 2432 ft.

FRANKLIN PARISH — Barbour Oil Co.'s Baker 1, 3-15-7e, sd 2595 ft. Harrell & Hall's Duncan 1, 20-13-7e, sd 2084 ft.

GRANT PARISH—Reu et al's Elias Williams 1, 10-7-4, sd 1913 ft. Tunica Pet. Co.'s O'Bannon 1, 38-7-1e, set 10 in. at 79 ft. Paulette et al's Holmes 2, 19-7-1e, set 10 in. at 100 ft. L. C. Swope et al's Fee 2, 18-9-1e, set 10 in. at 100 ft.

JACKSON PARISH—Grigsby et al's Adams



Say you saw it in The OIL WEEKLY

Adams 1, 22-17-4w, sd 2900 ft. Houseman et al's Norton 1, 34-15-3w, sd 400 ft. Ferguson's Trust Martin 1, 3-15-1e, flowing salt water at 3475 ft.

LA SALLE PARISH—Ayers Bro.'s Urania 5, 30-10-2e, set 10 in. at 100 ft. Louisiana Oil Ref Corp.'s Tremont B-1, 3-10-2e, blg 1584 ft. Tunica Pet. Co.'s L. & A. 27, 9-7-2e, sd 800 ft; L. & A. 28, 9-7-2e, wosr 769 ft; L. & A. 29, 7-9-2e, set 10 in. at 30 ft; L. & A. 32, 9-7-2e, set 10 in. at 30 ft; Whatley 1, 9-7-2e, arr to abn at 830 ft; Yeary et al's Urania 5, 8-10-2e, sd 1552 ft. Wingfield et al's Gibson 1, 2-9-1e, sd 1470 ft; Gibson 2, 2-9-1e, dk.

MOOREHOUSE PARISH — Consolidated Carbon Co 's White 1, 16-20-4, set 6 in. at 2086 ft. Falcon Drlg. Co.'s Gladney 1, 5-21-7e, set 12½ in. at 210 ft. Natural Gas Prod. Co.'s Crossett 20, 21-23-7e, set 12½ in. at 185 ft. United Carbon Co.'s Townsend 1, 29-21-5e, set 6 in. at 2222 ft; Atkins 1, 26-20-5e, dk.

NATCHITOCHES PARISH—Lawson et al's Clark & Morse Lbr. Co.'s 1, 23-5-6w, sd 2853 ft. Ohio Oil Co 's Thomas 1, 23-13-6w, dr 2395 ft. E. C. Reidenheimer's Blewer 1, 10-11-8, arr to abn 1533 ft.

OUACHITA PARISH—Consumers Gas Co.'s Williams 1, 10-19-5e, set 6 in. at 2168 ft. Louisiana Dev. Co.'s Fee 40, 29-10-5e, set 12 in. at 190 ft; Fee 41, 31-20-5e, set 12½ in. at 180 ft. Ouachita Nat. Gas Co 's D'Arbonne 2, 25-19-2e, sd 2780 ft. Peerless Co.'s Moore 3, 29-20-4e, lcn. Palmer Corp.'s Millsap 4, 36-20-4e, dr 1763 ft.

RAPIDES PARISH — Minnesota Corp.'s Wattermack 1, 7-5-3w, sd 2091 ft. George Sebastier's Ritchie 1, 38-5-4, dr 1310 ft.

RED RIVER PARISH — Alden Oil Co.'s Powell 1, 13-11-10, dr 2690 ft. Gulf Refining Co.'s Kennedy 23, 24-13-11, wosr 2551 ft. Havlett Simmons Neely 1, 1-14-12, set 10 in. at 200 ft.

RICHLAND PARISH — Gulf Ref. Co.'s Rhymes 2, 5-16-6e, sd 3052 ft; Wayne L. & T. Co.'s 1, 36-17-5e, sd 3052 ft; Seibert 2, 11-16-5e, sd 2303 ft. S. D. Hunter's Seibert 1, 1-16-5e, sd 2358 ft. Helm et al's Tensas 1, 10-14-5e, dk. Louisiana Pet. Co.'s Binion 1, 22-17-6e, sd 2474 ft. Oliver et al's Hatch 1, 2-15-5e, trying to set cas at 2316 ft Ruston Drlg. Co.'s Earle 1, 5-16-5e, dr plug 2330 ft. Standard Drlg. Co.'s Delta H. L. Co. 1, 22-16-7e, sd 200 ft. Tex-La Carbon Co.'s Broughton 1, 1-15-6e, sd 2602 ft.

SABINE PARISH — Arkansas Fuel Co.'s Logan A-1, 23-10-12, dk; Logan 2, 28-10-12, set 6⅝ in. at 3096 ft; Horn 1, 33-10-12, set 10 in. at 205 ft; Logan 6, 33-10-12, dr 3170 ft; Logan 8, 33-10-12, dr 2970 ft; Logan 9, 33-10-12, dr 3043 ft; Logan 10, 32-10-12, dk; Moore 1, 32-10-12, set 6⅝ in. at 3175 ft; Williams 1, 33-10-12, dr 2850 ft Emlet et al's Bowman Hicks 5, 8-7-12, sd 4070 ft; Bowman Hicks 6, 8-7-12, arr to deepen 3710 ft; Bowman Hicks 7, 11-7-14, set 10 in. at 631 ft; Bowman Hicks 8, 16-7-12, sd 579 ft; Sabine Lbr. Co. 1, 8-7-13, dk. Louisiana Oil Ref. Corp.'s Logan 1, 28-10-12, blg 3244 ft. H. J. Morgan's Reese 1, 5-9-12, dk. Magnolia Pet. Co.'s Hall 1, 33-10-12, dr 2365 ft; La. L. L. L. Co. 2, set 10 in. at 180 ft; Rimbert 1, 32-10-12, dr 100 ft. C. W. Robinson's Hamlin 1, 6-9-13, dr 1974 ft. Woodley Pet. Co.'s Robinson 1, 33-10-12, bld dry, testedy dry 3265 ft.

UNION PARISH—Camette et al's Tugwell 1, 21-22-1e, dr 1580 ft. Clark Creek Pet. Co 's Frost Johnson 2, 9-23-1e, sd 2307 ft. Interstate Nat. Gas Co.'s Parks 1, 23-20-3e, dk.

WEBSTER PARISH—Davis et al's Lee 1, 22-22-9, sd 3512 ft. W. T. Hunt's Bestineau Webster Oil Co. 1, 35-18-10, dr 50 ft. Louisiana Oil Ref. Corp.'s a yGr7, 28-21-10, set 6 in. at 2559 ft. Magnolia Pet Co.'s Cox 3, 23-21-10, dr 2800 ft; Marshall 1, 21-21-10, dr plug 2546 ft; Marshall 2, 21-21-10, set 10¾ in. at 321 ft; Obier 1, 32-23-9, dk. Northwest Louisiana Gas Co.'s Coyle 1, 21-21-10, milling 4200 ft. Ohio Oil Co.'s Bank of Cotton Valley 2, 22-21-10, dk; Bank of Cotton Valley 4, 22-21-10, r 2396 ft. Woodley Pet. Co.'s Cox B-1, 23-21-10, set 12½ in. at 270 ft.

WINN PARISH—Cherokee Pet. Co.'s Albritton 1, 27-10-1e, sd 900 ft. Dodge et al's Tremont 1, 35-13-3w, dr 1154 ft Humble O. & R. Co.'s L. & A. 23, 33-10-2w, set 10 in. at 40 ft. H. L. Hunt's Tremont 1, 27-10-1e, r 1450 ft. J. V. Long's Milam 1, 26-13-3w, sd 1550 ft. Rowe et al's Urania 1, 26-11-1e, dk. H. M. Roake's Southern Mineral Co 1, 19-11-3w, arr to abn at 800 ft. Standard Oil Co.'s Tremont 1, 1-12-2w, dr 4024 ft. F. A. Schuman's Albritton 1, 27-10-1e, sd 1518 ft.

WEST CARROLL PARISH—Phillips Pet. Co.'s Marion 1, 32-20-9e, lcn.

WEST TEXAS

Completions

Company, Well and Location	Initial Production Bbls.	Depth
NOLAN COUNTY—		
Thomas-Reynolds et al, Allen 1 ...	*	3511
TAYLOR COUNTY—		
Mid-West Explo. Co , Toombes 1...	*	2757
UPTON COUNTY—		
Donnelly & Marland Oil Co., University 1	*	3807

ANDREWS COUNTY—Carter-Zweifel et al's Cowden 1, elev 3156 ft, top salt 1375 ft, dr 3285 ft. J. S. Cosden et al's Bedford-Ratliff 1, rig. Geo. B. Calvin & Belt's Bedford-Ratliff 1, lcn. Deep Rock Oil Co.'s W. J. Harris 1, elev 3168 ft, sp and sd. Maer-Staniforth et al's Meador-Taylor 1, elev 3215 ft, top salt 1650 ft, making gas 3010 ft, dr 3665 ft. C. B McKinnon et al's J. S. Means 1, sp and sd.

BORDEN COUNTY—Stivers et al's Snodgrass 1, sd 3000 ft. J. L. Kennedy et al's J. S. York 1, fsh 980 ft.

BREWSTER COUNTY—Van McPhail et al's McIntyre 1, sd 215 ft; McIntyre 1 and Brown 1, lcn.

COKE COUNTY—Danciger O&R Co.'s Byrens 1, sd 605 ft. Lipan Oil Co.'s Conner 1, elev 2045 ft, sd 1215 ft

CONCHO COUNTY—Harry Adams et al's Price 1, sd 980 ft. Exploration Co.'s Wilson-Hartgrove 1, sd 1930 ft.

CRANE COUNTY—Geo. Church & Fields' University 2 and University-Duoll 2, rigs; Church & Bert Weekly's University 3, top salt 1060 ft, dr 1260 ft. Cromwell & Pickrell's University 4, elev 2556 ft, top salt 1040 ft, dr 2715 ft; University 6, elev 2560 ft; top salt 1025 ft, cmt cas 2700 ft; University 7, elev 2564 ft, top salt 1080 ft, dr 2420 ft; University 11, elev 2567 ft, dr 885 ft; University 12, elev 2564 ft, top salt 1055 ft, dr 1260 ft. Eastland Oil Co. & Collett-O'Keefe's University 3, top salt 1070 ft, dr 2330 ft; University 5, top salt 1065 ft, dr 2680 ft; University 6, top salt 1080 ft, dr 1975 ft; University 7, top salt 1095 ft, dr 2715 ft. Gulf Prod. Co.'s J. T. McElroy 10, rig; McElroy 13, elev 2559 ft, top salt 1050 ft, bit cased off, dr 2025 ft; McElroy 14, elev 2558 ft, top salt 1023 ft, top brown lime 2708 ft, dr 2710 ft; McElroy 15, elev 2561 ft, top salt 1055 ft, top brown lime 267 ft, dr 2660 ft; McElroy 16, elev 2563 ft, top salt 1100 ft, dr 1690 ft; McElroy 17, 18, 19, 20, 21 and 22, rigs; University 8, top salt 1255 ft, dr 2430 ft; University 9, elev 2608 ft, top salt 1185 ft, dr 2485 ft; University 10, elev 2611 ft, top salt 1225, top brown lime 2908 ft, dr 2915 ft Waddell 2, dr 465 ft. Humble's University 9, elev 2577 ft, top salt 1137 ft, sd for shot with hfo 2880-2970 ft; University 10, dr 1065 ft; University 11, rig. Independent O&G Co.'s University 3, rig; University 1-B, dr 675 ft. Landreth Prod. Corp.'s State-University 1, elev 2558 ft, top salt 1040 ft, flowing by heads 2780-2860 ft; State 2, elev 2554 ft, top salt 1020 ft, flowing 180 bbls per hour at 2825-45 ft; State 3, elev 2561 ft, top salt 1065 ft, cmt cas 2693 ft; State 4, elev 2557 ft; top salt 1035 ft, dr 2335 ft; State 5, elev 2564 ft, top salt 1060 ft, cmt cas 2675 ft; State 6, elev 2563 ft, dr 2050 ft; State 7 and 8, rigs. Magnolia's University-Hardwick 2, elev 2566 ft, top salt 1065 ft, cmt 5 3/16-in cas 2917 ft; Hardwick 3, rig; Hardwick 7, dr 380 ft; Hardwick 8, dr 150 ft; Hardwick 9, dr 165 ft; University-Lassiter 3 and 4, rigs; University-O'Keefe 6, dr 2935 ft; O'Keefe 8 and 10, rigs. Prairie's University 7-A, lcn; University-Lassiter 2, dr 220 ft. Simms & Atlantic's University 8-A, fsh 2780 ft; University 9-A, top salt 1055 ft, dr 2605 ft; University 3-C, top salt 1125 ft, dr 2695 ft; University 4-C, dr 455 ft; University 5-C, top salt 1080 ft; dr 1715 ft; University 6-C, dr 310 ft; University 2-D, dr hfo 2913 ft; University 3-D, 4-D, 5-D and 6-D, rigs; University 1-E, dr 200 ft. Tidal & Turman-Maxwell's University 5-F, top salt 1135 ft, dr 2125 ft; University 6-F, dr 1820 ft; University 1-I, dr 2245 ft; University 2-I, lcn. Wise & Jackson's Crier-McElroy 1, lcn in sw corner sec 184.

CROCKETT COUNTY—V. T. Bolin & Co.'s P O. Coates 1, sd 2110 ft. Cumberland's Couch 1, sd 2075 ft. W. W. Donnelly & J. D. Young's Pierce 1, elev 2105 ft, sd 1375 ft; Shannon 1, sp and sd. Humble's Powell 2-B, dr 715 ft. Wm. Schaffer et al's University 2, top salt 1060 ft, dr 1415 ft. P. H. Williams et al's Powell 1, elev 2723 ft, top salt 1052 ft, top lime 2466 ft, flowing 300 bbls oil 2575-90 ft. World Oil Co.'s Schneeman 1, sd 2575 ft

JEFF DAVIS COUNTY — Humble's C. Flores 1, dr 300 ft. J. K. Hughes Dev. Co.'s J. S. Means 1, trace oil 3180 ft, dr 3350 ft.

ECTOR COUNTY — J. S. Cosden et al's Connell 2-A, elev 2849 ft, top salt 870 ft, top lime 3177 ft, dr 3275 ft; Connell 3-A, elev 2848 ft, top salt 863 ft, dr 3080 ft

FISHER COUNTY — Barbour Oil Co.'s Cross 1-A, elev 1890 ft, dr 2875 ft. Ideal Oil Co.'s Jameson 1, sd 2705 ft. Marland Oil Co. & Miley Oil Corp.'s W. W. Ammons 1, set 15½-in cas 725 ft. Marland & Texon Oil & Land Co.'s McCall 1, rig; Marland & Vacuum Oil Co.'s Denise 1, sd 565 ft. Stearnes & Streeter's Howe 1, dr 3720 ft. The Texas Co 's Stevens 1, dr 1325 ft.

GAINES COUNTY—Westheimer & Daube's Forbes 1, dr rotary 2410 ft.

GARZA COUNTY—Emerald Oil Co.'s Boren 1, sd 2600 ft. Pandem Oil Corp.'s Justice 1, rig.

GLASSCOCK COUNTY — The California Co.'s W. B. Currie 1, rig. F. M. Green et al's Oxshear 1, elev 2540 ft, sd 200 ft. Landreth Prod. Corp 's Houston 1, rig. Merriwether & World Oil Co.'s McDowell 1, dr 645 ft. R. R. Penn & Julian Pet Corp's Edwards 1, elev 2502 ft, top salt 1295 ft, dr hard sandy-lime 2410 ft Sid Richardson & Ted Collins' Forbes 1, dr 1005 ft.

TOM GREEN COUNTY—H. D. Camp et al's Wilkey 1, dr 350 ft. Fitzgerald & Taliaferro's Bennett 1, sp and sd. Marland Oil Co.'s Llano Fee 1, set 6⅝-in cas 2990 ft.

HOCKLEY COUNTY—El Capitan Oil Co.'s Ellwood 1-A, sd 1520 ft. World Oil Co.'s Ellwood 1, lcn.

HOWARD COUNTY—Bowers et al's C. Jones 1, elev 2218 ft, sd 500 ft. Fred Carey et al's Chalk 2, sd 1040 ft. Comet Pet. Co.'s Clay 2, dr 1690 ft. W. W. Donnelly & Mann's Martin 1, elev 2761 ft, top salt 960 ft, dr 1760 ft. Gulf Prod. Co.'s Chalk 3, cased off gas, fsh lug 1871 ft. Godley O&G Co.'s Hooks 1, elev 2702 ft, complete 100 bbls after shot 60 qts 1832-44 ft. L. C. Harrison et al's Roberts 1, sd 720 ft. Magnolia's Kelly-Chalk 4, dr 465 ft; G. O. Chalk 7, dr 1570 ft; Mary Chalk 5, dr 1015 ft; Sloan-Chalk 3, dr 1290 ft; Sloan-Chalk 4, dr 1455 ft. Marland Oil Co.'s Chalk 5-A, sd 1628 ft; Clay 1-C, sd 1817 ft; Clay 1-D, trace oil 2411 ft, dr 2575 ft; A. M. Fisher 1, elev 2740 ft, dr 655 ft; Marland & F. P. Zoch's Guitar Ranch 1, elev 2517 ft, top salt 1155 ft, dr 3335 ft; Jones 1, sd 500 ft. Mid-West Explo. Co.'s Clay 2, dr 710 ft. Owen-Sloan et al's Roberts 1, cmt cas 1537 ft. Pure Oil Co.'s Chalk 1, dr 1740 ft; Hooks 1, sd 1735 ft.

HUDSPETH COUNTY—Lockhart & Co.'s Gardner-Moseley 1, dr 205 ft.

JONES COUNTY—Bateman & Campbell's Southard 1, dr 2415 ft. E. P. Campbell & White Eagle O&R Co.'s Herndon 1, co with good show oil and gas 2485-99 ft. Cole & Hart's H. C. Hale 1, lcn. Hurley Oil Co.'s Largent 1, sd 2980 ft. Gillette & Hickey's Young 1, set 6⅝-in cas 1450 ft. Grisham-Hunter et al's Williams 1, sd hfw 2994-3011 ft. Hutson & Weaver's Smith 1, sd 700 ft. Marsten Oil Co.'s Howell 1, sd 2545 ft; Swan 1, dr 2715 ft. Mid-Continent Oil Co.'s H. Evans 1, dr hfw 3020-40 ft. W. G. Stough et al's Willis 1, ur 8¼-in cas 1275 ft. Phillips Pet. Co.'s Vestal 1, dr 2335 ft; Winters 4, missed regular oil pay, fsh 2705 ft. Swensondale Oil Co.'s Canton 1, sd 1665 ft. J. L. Tomberlin et al's Clapp 1, sd 1555 ft. World Oil Co.'s Boyd 1, ur cas 2785 ft.

KENT COUNTY—Douglas Oil Co.'s Scoggins 1, ur 8¼-in cas 2620 ft. Marland & Texon's Bilby 1, lcn.

KING COUNTY — Gibson-Johnson et al's Burnett 1, elev 1715 ft, sd 2500 ft. The Cali-

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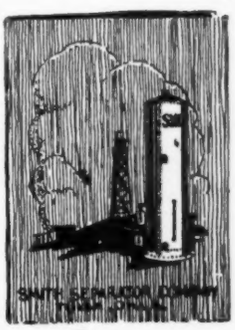

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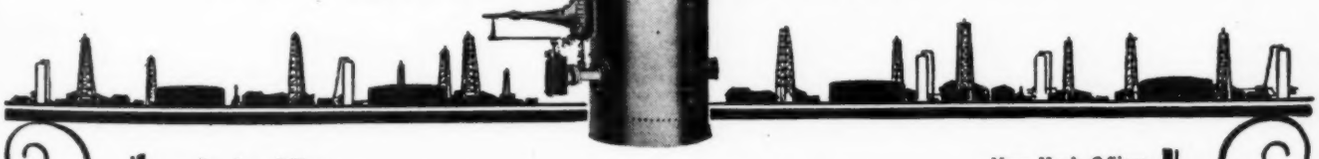

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Cable Address:
"Oilfields," New York

California Office:
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Texas Offices:
924 Post Dispatch Bldg., Houston, Texas
1402 Ft. Worth National Bank Bldg., Fort Worth, Texas

Louisiana Office:
405 Forest Ave., Shreveport, La.

Say you saw it in The OIL WEEKLY

fornia Co.'s Spikes 1, lcn. Mathews & Tyrell's F. Patton 1, lcn. Mid-West Explo. Co.'s Patton 1, elev 1706 ft, dr 2060 ft. Phillips Pet. Co.'s Burnett 1, elev 1820 ft, dr 3180 ft. Sinclair O&G Co.'s Burnett 1, elev 1804 ft, dr 2200 ft. Pattison et al's Patton 1, elev 1616 ft, sd 2065 ft. White Eagle O&R Co.'s Burnett 1, elev 1818 ft, sd 2530 ft.

LOVING COUNTY — Kingwood Oil Co.'s Moore 1, elev 3120 ft, top salt 1210 ft, show gas 1600-16 ft, sr 2725 ft. Owen & Sloan's Johnson 1, elev 2934 ft, sd 930 ft.

MIDLAND COUNTY — Orbit Oil Co.'s Moreland 1, materials.

MITCHELL COUNTY—The California Co.'s Foster 3, dr 1670 ft. Magnolia Pet. Co.'s Mary Foster 4, plugged back from 3250 to 2890 ft for shot; McKinney 1, dr 3260 ft; W. W. Watson 2, dr 3710 ft. Paul Teas et al's Ed. Strain 1, sd 3510 ft. Thraves et al's C. Way 1, sp and sd. Tex-O-Kan Oil Co. & Thraves' W. F. Sanders 1, dr 330 ft.

NOLAN COUNTY — Phillips Pet. Co.'s Scott 1, dr 3135 ft. John Winemiller Corp.'s Booth 1, sd 960 ft. Henry Zweifel et al's Longbotham 1, sd 1685 ft.

PECOS COUNTY—Geo. Anderson et al's Sherbino 1, lcn. Allsman & Bell's River Bed 1, top salt 450 ft, sd showing oil and gas 860 ft. Buell-Hagen et al's Batchelor 1, elev 3136 ft, cas collapsed 2740 ft; Jasper 1, lcn. The California Co.'s Cordova 1, dr 1990 ft. Cromwell & Kimberlin's Blackman-Schraff 1, plugged back from 2126 to 1948 ft for shot. Diamond Pet. Co.'s Blackstone-Slaughter 1, lcn. T. R. Cowell et al's J. C. Trees 1, fsh 3115 ft. M. C. Dibble et al's Bonebrake 1, dr 125 ft. John Droppleman et al's Hersheusen 1, top salt 2640 ft, dr 3005 ft. Bob Elmore et al's M. Holmes 1, elev 2176 ft, dr 155 ft. R. F. Garland & Co.'s El Paso Fee 1, machine. Kershaw & Livingston's Cannon 1, lcn. Mazda Oil Co.'s Smith 1, lcn. Mid-Kansas & Transcontinental's I. G. Yates 5-A, machine; Yates 6-A, set 6⅝-in cas 891 ft; Yates 7-A, lcn; Yates 2-B, set 6⅝-in cas 1051 ft. Moutray Oil Co.'s A. G. Robertson 1, dr 170 ft. Olean Pet. Co.'s A. Harral 1, G. A. Harral 1 and Sherbino 1, lcns. Red Bank Oil Co.'s A. Harral 1, lcn; McKenzie 1, rig. The Seventy-Five Oil Co.'s Perry 1, top salt 835 ft, dr 1775 ft. W. R. Shankel et al's Yates 1, elev 2200 ft, top salt 425 ft, sd 900 ft. Simms Oil Co.'s A. J. Devlin 1, lcn. Texon Oil & Land Co.'s Yates 2, top salt 430 ft, sd 1740 ft. Texon & Marland Oil Co.'s Blakesley 1, elev 2353 ft, top salt 840 ft, sd hfw 2245 ft. Quinby Oil Co.'s Bennett 2, sd 1457 ft; A. A. Gray 1, sd 660 ft. World Oil Co.'s Sherf 1, lcn

PRESIDIO COUNTY—Hadlock & Miller's Tootle 1, elev 2912 ft, co 2550 ft.

REAGAN COUNTY—H. D. Camp & Henshaw's University 1, rig. Tidal Oil Co.'s University 1, elev 2819 ft, top salt 1302 ft, ur cas 2775 ft.

REEVES COUNTY—Deep Rock Oil Co.'s Caldwell 1, dr 3855 ft. Humble's T&P Fee 1-B, 2380 ft. Exploration Co.'s Kinney 1, sp and sd. World Oil Co.'s Duff 1-A, co 1400 ft; Biggs-Holder 1, sd 1610 ft. David R. Thompson et al's A. A. Eddins 1, lcn.

RUNNELS COUNTY—Ladd-Hill et al's McMillan 1, dr 2215 ft. Noble O&G Co.'s Simms 1, set 10-in cas 1240 ft.

SCHLEICHER COUNTY—Tom Gray et al's Robinson 1, dr 1100 ft. General Security Co.'s Whitten 1, sp and sd.

SCURRY COUNTY—The Northwest Co.'s Stinson 1, elev 2225 ft, dr 4466 ft.

STERLING COUNTY—Bill Little et al's Fisher 1, dr 985 ft. G. B. Orr et al's N. Reed 1, rig. P. H. Williams et al's Clark 1, sd 1089 ft. Inland Oil Co.'s Durham 1, lcn.

STONEWALL COUNTY—R. F. Garland & Co.'s Ward 1, dr 1995 ft. Peer Oil Corp. & J. P. Johnson's Murrow 1, lcn.

TAYLOR COUNTY — Brown Prod. Co.'s Henslee 1, dr 780 ft. Humble's Mattie Jacobs 1, swedg cas 2520 ft. Dorning & Perrine's Hammer 1, sd 455 ft. Halbert et al's Hunt 1, sd 1960 ft. Gilbert Johnson et al's C. M. Brown 1, lcn. Morrison & Thompson's Rose 1, fsh 2539 ft. Owen & Sloan's Latimer 1, dr 1845 ft. Roeser-Pendleton, Inc.'s Sam Butman 1, dr 850 ft. Sanger O&R Co.'s Ike Brown 1, sd 1900 ft; Stem 1, lcn. World Oil Co.'s Griffin 1, sd 2270 ft.

TERRY COUNTY—Kingsland Oil & Potash Co.'s Brownfield 1, fsh 1235 ft.

UPTON COUNTY—Beatty et al's Lane 1, elev 2677 ft t p salt 880 ft, dr 3555 ft. Hults & Curtis' Giddings 1, dr 3650 ft. Marland Oil Co. & Levi Smith's University 1, sp. Simms Oil Co.'s Clark 1, elev 2469 ft, top salt 440 ft, top salt 440 ft, top lime 1715 f t,co 1900 ft.

VAL VERDE COUNTY—Douglas Oil Co.'s Sellars 1, rig burned, td 2940 ft. East Del Rio Oil Co.'s Russell-Whitehead 1, sd 3142 ft. Magnolia's Whitehead 1, fsh 190 ft. S. A. McCaskey's Sellars 1, dr 2640 ft. O. O. Owens et al's Mills 1, fsh 2440 ft. E. T. Williams et al's Holman-McNutt 1, fsh 2940 ft.

WARD COUNTY—Marland's Sealy 1, elev 2820 ft, t p salt 1070 ft, sd 3405 ft.

WINKLER COUNTY—Atlantic's Grisham-Hunter 1, elev 2823 ft, dr 530 ft. Champlin Ref. Co. et al's Cowden-Means 1, elev 2880 ft, top salt 1705 ft, water trouble 2440 ft. Gulf Prod. Co.'s Hendricks 2, rig; Hendricks 3, dr 435 ft; Hendricks 4, dr 1685 ft; Hendricks 5, dr 1060 ft; Hendricks 6, dr 1480 ft; Hendricks 7, dr 590 ft. Hill et al's Ambrugey 1, sd 3447 ft. Humble O&R Co.'s Grisham-Hunter 1, dr 565 ft; Hendricks 1, elev 2827 ft, sd 820 ft. Independent O&G Co.'s Grisham-Hunter 1 elev 2816 ft, set 10-in cas 1050 ft; Grisham-Hunter 2, rig; Hendricks 2, lcn. Llano Oil Co. & Roxana's Scarborough 1, elev. 2943 ft, top salt 1115 ft, set 8¼-in cas on bottom, td 3093 ft. McCulloch Oil Co. & Marland Oil Co.'s Tobe Morten 1, elev 2750 ft, sd 1980 ft. R. S. Matthews et al's Cowden 1-A, sd 525 ft. Pure Oil Co.'s Grisham-Hunter 1, elev 2823 ft, top salt 1525 ft, fsh 1552 ft; Grisham-Hunter 2, top salt 1512 ft, dr 2435 ft. Skelly Oil Co.'s Leeram 1, elev 2951 ft, top salt 1167 ft, dr 4450 ft. Southern Crude Oil Pur. Co.'s Hendricks 1-B, elev 2854 ft, sr 2371 ft; Hendricks 3-C, elev 2816 ft, top salt 1870 ft, top lime 2630 ft, dr gas pay 2700 ft; Hendricks 4-C, top salt 1913 ft, dr 2280 ft; Hendricks 1-F, rotary rig. Texon Oil & Land Co.'s Grisham-Hunter 1, elev 2826 ft, dr 920 ft. White Eagle O&R Co. et al's H. E. Collins 1, elev 2830 ft, sd 1030 ft. The Texas Prod. Co.'s Rhodes 1 (New Mexico) elev 3020 ft, top salt 1140 ft, fsh tools in gas pocket, td 2850 ft.

TEXAS PANHANDLE

Completions

PARMER COUNTY—
Humble O&R Co., Farewell 1..... * 3503

ROBERTS COUNTY—
Murphy et al, A. Gill 1 ..... * 650

EAST CENTRAL TEXAS

Completions

FRANKLIN COUNTY—
L. E. Trout et al, O. W. Gandy 1... * 3309

HILL COUNTY—
Riverland Oil Co.'s Humpheys 1... * 955

KAUFMAN COUNTY—
Cranfill & Atlantic Oil Prod. Co.
Mitchell 1 ..... * 3231

BELL COUNTY—Stanfield et al's Garrett 1, sd 925 ft.

FREESTONE COUNTY — Alexander-Lyles & The Texas Co.'s W. L. Edwards 1, sp and sd. J. S. Cosden et al's J. E. Woods 1, sd 4227 ft. Keechi Pet Co.'s H. A. Pickens 1, sd 4445 ft. Payne & Bonds' (was Orbit Oil Co.) F. A. Coleman 1, Austin chalk at 2586-2998 ft, sd dr 3360 ft.

HENDERSON COUNTY — Henderson Oil Co.'s Guy S. Perry 1, top Austin chalk 2308 ft, dr chalk 2415 ft.

HILL COUNTY — Alexander-Lyles & The Texas Co.'s Chris Knox 1, Austin chalk at 777-1018 ft, dr 1485 ft. Killiam & Phillips' T. B. Findley 1, Austin chalk at 800-1110 ft, sd 1447 ft.

HUNT COUNTY — Amerada Pet. Corp.'s Walter Grainer 1, elev 432 ft, Austin chalk at 2140-2737 ft, lowering cas to test show oil 3120-77 ft.

LIMESTONE COUNTY—C. W. Green et al's A. M. Beal 1, elev 445 ft, Austin chalk at 2647-2914 ft, sd 3680 ft. B. & A. Drilling Co.'s Jones 1, dr 3475 ft. J. B. Jones et al's W. F. Batchelor 1, dr 3320 ft E. L. Smith Oil Co. et al's Jake Steubenrauch 1, elev 529 ft, showing oil and gas, trying to drill deeper 5752 ft. Pandem Oil Corp.'s Bassett 1 (near Kosse) elev 437 ft, Austin chalk at 3125-3502 ft, dr rotary 4880 ft.

NAVARRO COUNTY—D. H. Byrd et al's Garrett 1, top Austin chalk 2364 ft, coring 3155 ft. Magnolia Pet. Co.'s Corrie Marshall 1 (near Rice) set 8⅝-in cas with 11-in hole to bottom, td 4354 ft.

UPSHUR COUNTY—Magnolia Pet. Co.'s G. L. Cannon 1, dr 2600 ft.

EAST TEXAS

Completion

SHELBY COUNTY—
Arkansas Fuel Oil Co.'s Bouland 1,
A. W. Canfield HRS ..... * 3724

ANDERSON COUNTY—Humble O. & R. Co.'s Southern Pine 2-A, J. Morton hrs, dr 4421 ft.

CHEROKEE COUNTY—Humble O. & R. Co.'s Elliott 2, M. Windsor hrs, loc; Reynolds 1, J. Durst hrs, dr 3420 ft; Ragsdale 2, N. Johnson hrs, dr 3972 ft. Kirby Pet. Co.'s Comersession 1, Joseph M. Maris Mosques hrs, set 15½-in at 213 ft. Magnolia Pet. Co.'s Summers Est. 1, W. Brewer hrs, sd 4330 ft. Panhandle Oil Co.'s Whalen 1, J. Jordan hrs, dk. Woodmanse Synd's Hall 2, J. Durst hrs, sd 800 ft.

HENDERSON COUNTY—Cayton et al's Hoffer & Nash 1, H. Jefferson hrs, loc. Cranfield Bro.'s Purfoy 1, W. K. Newell hrs, tested sw at 2965 ft. Henderson Oil Co.'s Perry 1, A. L. Adams hrs, rig.

CASS COUNTY—The Texas Co.'s Glosson 1, J. Meuchen hrs, rig.

HARRISON COUNTY—J. R. Bahan's Epps 1, James Short hrs, dk. B. A. Hardy Tr's Bryson 2, R. W. Bedford hrs, dk; Bryson 2, J. W. Bedford hrs, set 6-in at 1856 ft Magnolia Pet. Co.'s Trosper 2, J. H. Harrison hrs, set 13⅜-in at 214 ft. Marland Oil Co.'s La-Tex 1, A. W. O. Hicks hrs, rig. State Line O. & G. Co.'s George 1, E. Little hrs, set 10-in at 122 ft; Taylor 2, S Holloway hrs, set 10-in at 96 ft.

KAUFMAN COUNTY—Cranfill et al's Nichelson 1, A. Bennett hrs, sd 2490 ft.

NACOGDOCHES COUNTY—Steine & Lewis' Birdwell 1, Jose A. Chirtno hrs, sd 100 ft.

PANOLA COUNTY—Magnolia Pet. Co.'s Lewis 4, Jas Johnson hrs, set 6-in at 1915 ft.

RUSK COUNTY—Magnolia Pet. Co.'s Durren 1, Agulla Norris hrs, dk. McCurrie et al's Sparks 1, Jessee Coarse hrs, sd 1175 ft. Rusk Development Co.'s Matthews 1, Delores Cortinas hrs, sd 2610 ft.

SMITH COUNTY—Dr. Gathier et al's Parker 1, Don Thomas Quevado hrs, dk.

SHELBY COUNTY—Magnolia Pet. Co.'s Pickering Lbr. Co. 1, Wm. J. Crane hrs, dr 2342 ft. Wm. Sebastian's Pickering 1, T. F. Polly hrs, set 10-in at 185 ft.

UPSHUR COUNTY—Magnolia Pet. Co.'s Cannon 1, M. H. Palvador hrs, sd 2567 ft.

ANDERSON COUNTY—Humble's Hasal 1 Posey, oil showing 4418 ft. Cosden et al's Douglas 1, 9 miles w Palestine, lcn.

CHEROKEE COUNTY—Humble's Reynolds Mortgage Co. 1, Boggy Creek, fsh 3402 ft; Earle & Ragsdale 2, Boggy Creek, no report. Magnolia's Sumners 1, Ponta, sd 4329 ft, sand. Panhandle Oil Co.'s Wayland 1, Mt. Selmon, spd. Nichols et al's Hill 2, Alto, sd 800 ft. Kirby Pet. Co.'s Comer-Seisson 1, Rusk, dr 963 ft, sandy shale.

FREESTONE COUNTY—Rosser Pet. Co.'s Woods 1, Simsborough, sd 4318 ft sandy shale. Orbitt Oil Co.'s Colman 1, Simsborough, prep to deepen.

HOUSTON COUNTY—Porter et al's Austin 4, no report. The Texas Co.'s Houston County Coal & Mfg Co. 1, Lovelady, spd. Jasper Oil Co.'s Stone 1, dr 380 ft, sand.

TYLER COUNTY—Cheasman & Reynolds' Stone 2, Tyler, no report.

SOUTHWEST TEXAS

WEBB COUNTY—
Cole Pet. Co.'s Benavides 44..... ¶ 2348
O. W. Killam, Bruni 2 ..... ¶ 2317

(Continued on page 78)

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PERMITS GRANTED FOR NEW WELLS

OKLAHOMA

CANADIAN COUNTY—J. V. Bailey et al, Robinson 1, c ne sw 1-10-6w.

CARTER COUNTY—Humble O&R., J. D. Dizon 5, swc 30-1c-3w, Magnolia, M. Morris 2, sw se ne 21-2s-3w. Magnolia, Schwartz 9, ne nw ne 26-2c-3w.

CREEK COUNTY—Olean Pet., McGilbra 5, sw ne ne 30-14-8e. J. B. Grieves, Proter 1, se 12-19-8e. Reichard et al, Grayson 1, nw se 14-19-7e. Kennedy & Herner sw nw 5018-12e. C. G. Tibbens, Cobert 1, ne 8-18-12e. Future Devel., Behen 1A, ne se nw 2-16-11e.

GARFIELD COUNTY — Beopple et al, Mathis 1, ne sw 20-22-03w.

GRADY COUNTY—Carter, See-Hogue 1, c se nw ne 21-3n-5w.

KAY COUNTY—Texas, Woods 1, ne nw nw 30-27-1w. National, Buessing B 1, se nw nw nw 21-27-1e. Gypsy, Chamers 3, sw se nw 9-26-2w.

MUSKOGEE COUNTY—W. R. Sommerville, A. Rector 1, sw se 8015-17e. W. R. Somerville, T. Lewis 3, sw nw nw ne 17-15-7e. Gypsy, M. Sanders 21, c n l sw sw 34-15-18e. H. E. Williams, M. Sango 2, c e l ne nw 17-15-17e. O. T. Gilbertson et al, Cherry 3, c sw nw 27-14-16e. J. L. Selby, H. Brown 6, c s l sw nw 35-15-15e.

OKFUSKEE COUNTY—Ted Savoie, Hopwood 1A, c se sw 11-11-11e. Joe Hartman Holmes 1A, se nw ne ne 27-12-11e.

OSAGE COUNTY—I. T. I. O. 365, sw se ne nw 1-25-11e.

PAWNEE COUNTY—George Baker, Easly 1, se sw sw 3-20-6e.

PAYNEE COUNTY—Twin State, Douglas B 1, sw nw 8-18-4w.

PONTOTOC COUNTY—W. R. Ramsey, Warfle 1, nw ne ne 20-5n-8e. Homaokla, Harjo 2, sw se se 17-5n-8e.

POTTAWATOMIE COUNTY — Magnolia, Hatchcock 1, ne sw 11-7e-4e. W. B. Pine, Hamlin 1, ne se se 27-9n-4e.

SEMINOLE COUNTY — Texas, Reed 11, sw ne 14-8-6. Texas, Reed 10, ne se ne 14-8-6. Pure Oil, Strothers D 8, ne nw 1-8-6. Sinclair, Ellen 6, nw ne sw 11-8-6. Pure Oil, Strothers D 7, se sw 11-8-6; Strothers D6, ne se sw 11-8-6. I. T. I. O., Lizzie 2, se sw nw 11-8-6. Pure, Strothers B 8, se nw nw 36-9-6; Strothers B 7, ne sw nw 36-9-6; Strothers B 6, se sw nw 36-9-6. Phillips, Strothers 6, nw sw se 27-9-6. Sinclair, Polly 3, se sw nw 3-9-6. Pure Oil Aldridge 3, sw se nw 3-9-6. Amerada, Gross 1, se nw 24-9-6e. Sinclair, Hollins 1, sw ne nw 12-9-5e. Gypsy, Bruner 1, nw ne 10-9-5e. Midland Oil, Harjoche 1, sw se 34-10-6e.

STEPHENS COUNTY—Amerada, Hanson 1, ne se sw 12-1s-4w. Humble, Peddycart 1, nw 25-1s-4w.

TULSA COUNTY—Kolly & Ogg, se nw se 5-16-13e. Hivock et al, Unallotted 3, nw sw nw ne 4-19-10e.

KANSAS

BUTLER COUNTY—Empire G. & F., Reitz 1, nw se 34-27-5e. Blue Stem Oil., McLean 5, sw ne sw 5-27-6e. Phillips, Barnhill 4, nw ne 23-27-7e. Empire G. & F., Clark 1, ne se ne 3-28-5e. Mid-Kansas Oil & Gas, McAfee 1, ne nw ne 4-28-6e.

COWLEY COUNTY—McNabb et al, Wallace 3, sw ne nw 22-32-4e.

LYON COUNTY—Jackson & Wise, Bradfield 3, nw se nw 25-21-10e.

McPHERSON COUNTY—Texas, Chinberg 1, nw ne nw 32-18-2w.

MORRIS COUNTY—Nicols et al, Southwick 1, nw 14-17-7e; Wilde 1, nw se 15-17-7e.

RUSSELL COUNTY—Keys Pet., Baxter 1, sw se se 32-13-15.

SUMNER COUNTY—Marland Oil., Tedger 1, ne nw se 18-35-1e. Merridian O. & G., Hamilton 2, se ne 18-35-1e.

WEEKLY COMPARISON OF NEW WELLS

Following is a condensed table giving a comparison of permits or locations made for new wells during the past year in Kansas, Oklahoma, Arkansas, Louisiana, Texas, California and the Mountain States:

	Week Ending June 10	Previous Week	Total This Month	Total This Year	This Week Last Year	This Month 1926	Total Same Date 1926	Year Total 1926
Arkansas	6	5	11	188	34	51	627	910
California	..	14	14	701	15	31	776	1,293
Louisiana	11	11	22	310	22	52	613	1,318
Kansas	13	15	28	515	39	96	993	1,745
Oklahoma	52	49	101	2,029	106	213	2,716	5,165
Texas	98	148	246	4,953	267	532	5,582	12,158
Mt. States	10	..	10	295	30	65	167	....
Totals	190	242	432	8,991	513	1,040	11,474	*22,589

*Does not include Mt. States.

LOUISIANA

CADDO PARISH—Ohio Oil Co., Shreveport, Elizabeth Plum 1, 32-23n-16w, 330 ft e of state line and 1965 ft n of s line of sec 32. Texas Co., Shreveport, Alexander 1, 27-18n-16w, 660 ft n and 660 ft w of center of sec.

CALCASIEU PARISH—Vacuum, Houston, Bordages et al 4, 9-10s-9w, 1115 ft w and 225 ft n of se cor of n½ of nw¼.

DE SOTO PARISH—Hooser Oil & Dev. Co., Dallas, Berry 1, 5-11n-11w, 200 ft s and 200 ft e of nw cor of se¼.

LA SALLE PARISH—Natural Gas & Fuel Corp., El Dorado, Ark., Urania M-9, 20-10n-2e, 200 ft s and 660 ft e of nw cor of sw¼ of sw¼. Tunica Pet. Co., Shreveport, L. & A. Oil Co. 32, 9-7n-2e, 200 ft n and 200 ft e of sw cor of sw¼ of nw¼.

MOREHOUSE PARISH—W. C. Feazel, Monroe, Faulk 1, 15-20n-4e, 1999 ft s and 660 ft e of nw cor of sec.

NATCHITOCHES PARISH—Ohio Oil Co., Shreveport, L. & A. Oil Co. 2, 26-13n-6w, 330 ft s and 330 ft e of nw cor of nw¼ of ne¼.

OUACHITA PARISH—Jordan Drilling Co., Monroe, Fudickar 2, 25-18n-4e, 8302 ft s and 723 ft w of s¼ cor of sec 13 in sec 25.

SABINE PARISH—Arkansas Fuel Oil Co., Shreveport, Logan Oil Co. 10, 32-10n-12w, 2464 ft n and 330 ft e of sw cor of se¼. H. P. Tate, Pleasant Hill, H. A. Cook Land Co. 1, 23-10n-11w, 500 ft s and 200 ft e of nw cor of se¼ of nw¼.

ARKANSAS

COLUMBIA COUNTY—Lion Oil Refining Co., Pattee 1, 2018-18, 330 ft s and 330 ft w of c of section.

NEVADA COUNTY—Fruen et al, Rhodes 1, 22-12-21, se cor of ne¼ of nw¼.

OUACHITA COUNTY—Humble O. & R. Co., Jenkins 1, 15-14-19, 1470 ft s and 660 ft e of center of sec. The Texas Co., Spahr 1, 35-15-16, ne cor of ne¼ of nw¼.

UNION COUNTY—Simms Oil Co., Ballard 1, 9-18-13, ne cor of se¼ of ne¼. Atlantic Oil Producing Co., Dumas 11, 9-17-16, 660 ft n and 660 ft e of sw cor of ne¼.

MOUNTAIN STATES

MONTANA

HILL COUNTY—Midwest Refining Co., 23, nw sw 10-15-29.

NEW MEXICO

EDDY COUNTY—Manhattan Oil Co., 1, se ne 1-18s-27e.

COLORADO

LAKE COUNTY—G. G. Gilchrist and Continental Oil Co., 1, se ne 2-9n-79w.

MESA COUNTY—Texas Co.'s 1, sw 23-4n-92w; 2, nw 23-4n-92w.

WYOMING

NIOBRARA COUNTY—Buck Creek Oil Co., 1, ne 7-35n-65w; 1, ne 25-37n-63w.

PARK COUNTY—Local Oil Co., No. 3, nw se 32-58-99; 4, nw sw 32-58-99.

BIG HORN COUNTY—Torchlight Oil Co.'s 1, nw cor lot 16, 19-51-92.

TEXAS

ARCHER COUNTY—Sun Oil Co., Dallas, Andrews 1, R. R. Rainey sur, 1050 ft to n and 150 ft to w line. B. T. Tackett, Wichita Falls, Prideaux 2, A. Rohus sur, 300 ft se of No. 1. Hamilton & Staus-Allen Oil Co., Wichita Falls, J. Evans 1, J. Minton sur, 150 ft to e and 660 ft to s line. Perkins & Cullum & Continental Oil Co., Wichita Falls, Wilson 3, blk 114, Amer. Trib. sur, 450 ft to w and 490 ft to s line. Gulf Prod. Co., Fort Worth, Wilson 2, S 1, S. P. Ry sur, 300 ft s of 1; 3, 376 ft s of 2. Western Oil Sales Corp., Wichita Falls, Prideaux 5, A. Rohus sur, 300 ft s of 3. Maer & Staniforth, Wichita Falls, Wilson 6, Day Land & Cattle sur, 300 ft e of 5; 7, 300 ft n of 6. Bridwell & Heydrick Oil Company, Wichita Falls, Cowan 1, blk 59, J. C. S. L. sur, 750 ft to n and 150 ft to e line. Atlantic Oil Prod. Co., Dallas, Wilson 2D, Day Land & Cattle sur, 150 ft to n and w lines. Roxana Petroleum Corp., South Bend, Farmer B1, B. C. S. L. sur, 1600 ft to w and 3800 ft to s line. United Prod. Co., Wichita Falls, Perkins 1, blk 22, D. C. S. L. sur, 150 ft to n and 570 ft to e line. Western Oil Sales Corp., Wichita Falls, Prideaux 6, A. McMullen sur, 750 ft to w and 150 ft to s line. Petroleum Prod. Co., Wichita Falls, Texas. J. H. Turbeville 8C, blk 142, R. Carson sur, 300 ft s of 7. Atlantic Oil Prod. Co., Dallas, Wilson 3D, DL&C Co. sur, 300 ft e of 2.

AUSTIN COUNTY—James S. Smith, Brenham, Pomical 1, S. M. Williams, sur, 80 ft n of center of s line.

BROWN COUNTY—E. N. Schaffner, Cross Plains, Byrd 1, N. Sherrod sur, 785 ft to w and 1070 ft to s line. G. F. Kerr, Brownwood, Boysen 2, M. C. Mullins sur, 150 ft to sw and 450 ft to se line. Scrivner & Davis, Brownwood, Clark 1, 274-275 K. C. S. L. sur, 450 ft to n and 600 ft to w line. B. X. O'Reilly, Brownwood, Green 22, G. W. Huffman sur, 750 ft to s and w lines. Tower & McKanna Inc., Wichita Falls, Shore 18, 625 C. S. Betts sur, 335 ft e of 19; 19, 330 ft s of 14; 16, 300 ft e of 18; 17, 300 ft s of 16. Gibson Oil Corp, Amarillo, Shore 11, J. C. Ryan sur, 300 ft e of 6. P. E. Hill, Tulsa, Childress 1, HT&B 10, 575 ft to E and 600 ft to s line.

BRAZORIA COUNTY—Roxana Petroleum Corp., Houston, Randon 1, C. G. Alsberry, e central; Allen 4, J. G. McNeel, w central.

BELL COUNTY—Mason & Moore, Belton, Ferguson 1, J. Bowers sur, 150 ft to n and 300 ft to e line.

BAYLOR COUNTY—Fuller, Sowell & Morrison, Wichita Falls, F. Malones 1, blk 3, D & W sur, 1816 ft to e and 150 ft to s line.

CALLAHAN COUNTY—Navarro Oil Co., Houston, Bennett 3, blk 99, C. C. S. L. sur, 300 ft n of 1. A. H. Volz et al, Brownwood, Foster 1, s 43, C. C. S. L. sur, 450 ft to e and 660 ft to s line. Cisco Oil Co., Cisco, Warren 16, 297, TE&L sur, 300 ft s of 2. J. D. Magee, Abilene, Finch 1, T. Stratton sur, 150 ft

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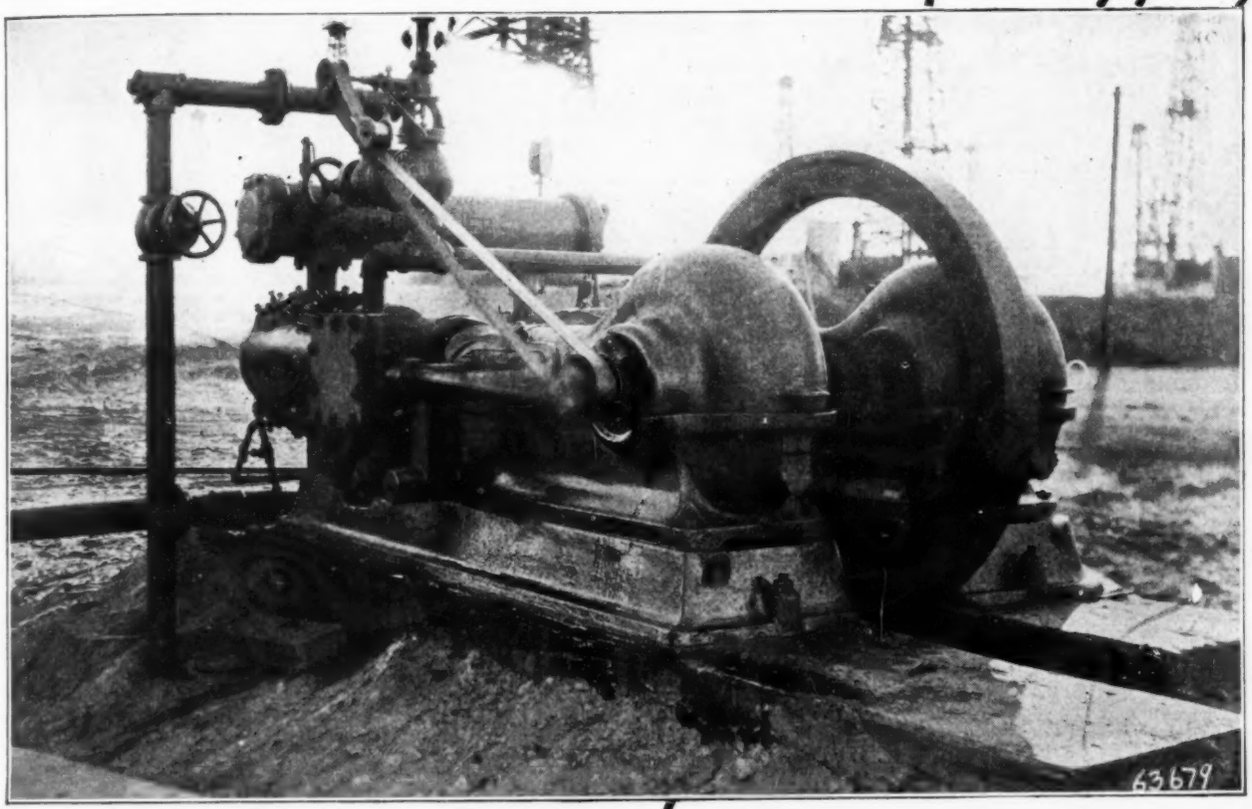

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LOS ANGELES 634 Santa Fe Ave. | LONDON 25 Bishopsgate, E. C. 2

GARDNER GOVERNORS PUMPS COMPRESSORS

GARDNER

Say you saw it in The OIL WEEKLY

to n and 180 ft to e line. Forster & Burkett, Burkett, Ramsey 3, 3195, TE&L sur, 300 ft e of 1. J. A. Jones, Moran, Warran 10, 2030, TE&L sur, 465 ft to n and 460 ft to w line. Moutray Oil Co., Abilene, Flores 17, S 149, BBB&C sur. Oyster & Rife, Abilene, Hobbs 1, S 237, Pittman sur, 1200 ft to n and 2500 ft to e line.

COOKE COUNTY — Hedrick-Camp & Oil Operators' Trust, Wichita, Kleiss 6, blk 60, Littleton sur, nw corner. Gainesville Oil & Dev. Co., Gainesville, Staffels 1, blk 58, Barnett sur, 150 ft to s and w lines.

CHAMBERS COUNTY—Barkley & Meadows, Houston, Winfrey 1, W. D. Smith sur, 450 ft to n and 150 ft to w line.

CHEROKEE COUNTY — Kirby Pet. Co., Houston, Sessions 1, J. M. Musquis sur, 200 ft to n and 700 ft to w line.

CHEROKEE COUNTY — Montex Corp., Fort Worth, Goss 1, blk 60, L. C. S. L. sur, 2200 ft to w and 3700 ft to n line.

DEWITT COUNTY—Collette Oil Co., San Antonio, Boldt 1, Kelly & Laster sur, 3129 ft to e and 800 ft to s line.

EASTLAND COUNTY—Texas Co., Wichita Falls, Hightower 14, W. Van Norman sur, 300 ft ne of 3. Louisiana Oil & Ref. Co., Shreveport, Sneed 2, S 30, McL. C. S. L. sur, 150 ft to n and w lines.

FORT BEND COUNTY—Gulf Production Co., Houston, Beard 5, No. 111, H & TC sur, 500 ft s of 4. West- Schenck 11, T. Hobermaker sur, 285 ft to s and 100 ft to e line.

FOARD COUNTY — Texas Co., Wichita Falls, Watkins 1, J. Armstrong sur, 1000 ft to s and w lines.

GRAY COUNTY—Roxana Petroleum Corp., South Bend, Coombs-Worley 2, S 39, blk 3, I&GN sur, 330 ft to n and 1050 ft to w line; 3, 330 ft to n and 990 ft to e line. Gulf Prod. Co., Fort Worth, Saunders 2, S 40, blk 3, I&GN sur, 660 ft w of 1. Reynolds-Worley 5, s 83, blk 3, I&GN sur, 660 ft s of 2.

GONZALES COUNTY—L. P. Unkel, Gonzales, Johnson 1, C. H. Jaeger sur, se corner.

GRIMES COUNTY — Saunders & Steele, Mexia, Black 1, C. O. Edwards 350 ft to n and 340 ft to w line. J. G. Pundt, San Antonio, Cuthrell 5, O. Conner sur, nw corner.

HUTCHINSON COUNTY—Navajo Oil Co., Amarillo, Cockrell 1, S 3, blk B3, 223 ft to n and 330 ft to w line. McMan Oil & Gas Co., Tulsa, Yoke 1, S 2, blk 4, H&GN sur, 330 ft to s and w lines; Martin 3, S 3, blk B3, D&SE sur, 330 ft to e and 220 ft to n line. Marland Oil Co., Fort Worth, Christian 5, S 8, M. Anglin sur, 330 ft to n and 1320 ft to w line. Carver 1, S 6, Wm. Heath sur, 1320 ft to n and 660 ft to e line. W. D. Wells, Amarillo, Cockrell 1, S 3, B 23, 330 ft to s and w line.

HARRIS COUNTY—Barkley & Meadows, Houston, Burt 8, Stevenson sur, 75 ft to n and 450 ft to e line. Gulf Production Co., Houston, Houston-Smith 7, Wm. Scott sur, 50 ft e of center of w line.

HARDIN COUNTY—Capitol Oil Co., Orange, Hodges 3, M. A. Harris sur, 650 ft to e and 700 ft to s line.

JACK COUNTY—J. D. Carpenter, Olney, Gillespie 1, W. Barryman sur, 150 ft to e and 450 ft to s line.

MILAM COUNTY—Noack Oil Co., Rockdale, Seelke 7, T. J. Chambers sur, 300 ft se of 6. Noack & Lanning, Rockdale, Roland 2, Rockdale sur., 383 ft n of 1. Neeley 1, Wm. Allen sur, 160 ft to s and e lines. Clark & Michalk, Thorndale, Johnson 1, J. J. Acosta sur, 450 ft to n and e lines.

MONTAGUE COUNTY — Continental Oil Co., Wichita Falls, Crow 2, J. Chambliss sur, 150 ft to n and e lines. Arco Oil Co., Box 1020, Wichita Falls, Maddox B 2, blk 14, H. S. Arnold sur, 150 ft to w and 258 ft to s line.

NACOGDOCHES COUNTY—Sell Oil Co., Chireno, Birdwell 2, J. A. Chireno sur, 312 ft nw of 1.

ORANGE COUNTY—Gulf Prod. Co., Houston Granger 4, Wm. Dyson sur, 75 ft to n and w lines.

PANOLA COUNTY—Humphreys, Hunter & Burt, Dallas, Watterman 1, J. F. Cheairs sur, ne corner.

SHACKELFORD COUNTY—W. G. Clark, Dallas, Diller 1, S 41, L. A. L. sur, 570 ft to e and 360 ft to s line. T. G. Shaw, Fort Worth, Broadfoot 6, S 20, Bayland Asy sur, 275 ft n of 5.

SAN SABA COUNTY—B. C. Graves et al, Cisco, Neal 1, No. 343 sur, 1500 ft to e and 150 ft to s line.

STEPHENS COUNTY—Crump & Conkling, Cisco, Townsend 1, S 37, blk 7, T&P sur, 150 ft to n and e lines.

THROCKMORTON COUNTY—Associated Petroleum Co., Fort Worth, Stacey 2, 1614, TE&L sur, ne corner. Gulf Prod. Co., Fort Worth, Graham A 5, 985, TE&L sur, 350 ft s of 3. Cranfill & Reynolds, Cisco, Leen 2, 221, BBB&C sur, 900 ft e of 1.

WICHITA COUNTY—Kent Bros., Burkburnett, Callen 3, A. Bingham sur, e of 2. John O'Neil, Wichita Falls, Woodard 1, S 209 Wag. Col. sur, 150 ft to s and w lines. White, Duncan, Kimmell & Dillard, Wichita Falls, Foster & Allen 1, SA&MG sur, nw cor. J. L. Swanner, Wichita Falls, Williams-Parker 11, blk 3, J. McColl sur, 50 ft e of 6; 12, 270 ft w of 7. Consolidated & Apple-Brandeberry Oil Co., Wichita Falls, Ancell 4, S 11, blk 7, H& TC sur, 300 ft e of 2. M. Blair, Electra, Parmenter 1, blk 20, blk 123, 150 ft to s and e lines. Dr. C. W. Wallace, Wichita Falls, Burnett 25, J. A. Bradford sur, 150 ft to s and e lines. J. H. Cotton, Wichita Falls, Overby 1, J. M. Sharp sur, sw corner. Petroleum Prod. Co., Wichita Falls, Munger 2, blk 31, W. V. F. L. sur, 300 ft e of 1. R. A. Lanning et al, Wichita Falls, McCarty 2, S. M. Fowler sur, sw corner. R. S. Reeder, Wichita Falls, Chilson 1, blk 8, DCSL sur, 150 ft to n and w lines.

WILBARGER COUNTY—Barkley & Meadows, Wichita Falls, Waggoner 1, S 107, blk 14, H&TC sur, 1170 ft to e and 150 ft to s line. R. C. Morrison, Vernon, A. Streit 1, S 29, blk 9, H&TC sur, 150 ft to s and w lines.

WHARTON COUNTY—Patterson & Gayle, Houston, Plocky 1, blk 18, Mission Land Co., 150 ft to w and 75 ft to s line.

WILDCATS

(Continued from page 74)

SOUTHWEST TEXAS

CALDWELL COUNTY—Lou Gould Shaddon's Davis 1, dr. United North & South Oil Co.'s Kelly 1, dr; Tiller 1, dr. Van Keuren Oil Co.'s Ridout 1, no report.

DUVAL COUNTY—Associated Oil Co.'s Sutherland 1, dr. Dixie Oil Co.-Southern Crude's Gray 1, sur 315, dr below 2350 ft. Humble-Reiter & Foster's Koehler 6, dr below 875 ft. Humble's Singer 11, dr; Singer 12, dr below 3659 ft; Walsh 7, dr; Welder-Woods 2, dr below 1595 ft; Carillo 1, dr. Magnolia Pet. Co.'s Spear 1, dr; Benavides 2, dr below 2590 ft. Maurer & Duggan's Hoffman 1, dr. National Oil Co.'s Mall 1, dr. G. B. Pickett's No. 1, sur 230, dr.

ZAPATA COUNTY—E. K. Bateman's Vela 2, ru. Duke et al's Martinez 3, ru. Hill & Associaed's Villa Grant 1, dr. O. W. Killiam's Lange 1, dr. Killam-Duggan's R. B. Cuellar 1, cas set in cement at 1356 ft, prep to bring in. Langford-Duke's Charco Rendendo Grant 1, dr. Howard Staggs et al's Hinnants 1, dr. Mission Oil Co.'s Slator 1, dr. Magnolia Pet. Co.'s Jennings 5, dr; Cuellar 4, dr. Texas Co.'s Jennings 6, dr. J. H. Winch's Bustamante 1, dr 1560 ft.

TEXAS GULF COAST

Completions

Company, Well and Location		Initial Production Bbls.	Depth
BRAZORIA COUNTY—			
The Texas Co.'s Carter 1		*	1031
Starks et al's Hinkle 1		*	655
Gulf's Perry 2		*	3161
Associated's Seaburn 1		*	4084
MATAGORDA—			
Gulf's Craig 8		*	5092
Parkinson 3		*	962

AUSTIN COUNTY — Humble's Bellville School 1, Racoon Bend; dr 3868 ft, shale; Reese 2, setting 2 jts screens 3302 ft. R. E. Graves' Cleveland 1, Hickory Mound, dr 1472 ft, sandy shale. Mewis et al's Mewis 1, Bellville, sd 1505 ft, gbo. Kane et al's Knolle 1, Bellville, temp abn 721 ft, gyp.

BRAZORIA COUNTY—Roxana's Clemens 4, Clemens dome, fsh 4817 ft; Pabst 2-A, Clemens dome, dr 5589 ft, sandy lime; Allen Bernard River 1, Allen dome, c o to bottom, 5139 ft; Allen 4, dr 2195 lime and gbo. Randon 1, dk. The Texas Co.'s Carter 1, Pledger, abn 1031 ft. Starks et al's Hinkle 1, w of Hinkle's Ferry, abn 747 ft; Hinkle 2, w of Hinkle's Ferry, rigging up. Staley et al's Glover 1, Anchor, sd for repairs, 1120 ft. Danscinger Oil Co.'s Bartlett 1, 3 mi w West Columbia, lcn. Gulf's Perry 2, Stratton Ridge, abn 3161 ft, top salt 3045 ft. Associated's Seaburn 1, Stratton Ridge, abn 4084 ft. Pure's Armstrong 1, Stratton Ridge, dr 4126 ft, shale.

FORT BEND COUNTY—Gulf's Trone 3, Long Point, dr 805 ft, cap rock. Wolfe 3, Long Point, dr 795 ft, lime and sulphur; Davis 25, Long Point, lcn; Beard 5, Long Point, dr 1612 ft, gbo. Sun's Farmer 3, Boling, no report.

HARRIS COUNTY—P. S. Griffith's Fee 2, 12 mi N. Houston, fsh 3517 ft, gbo. Juanita Oil Co.'s Kitsman 1, Cypress, dr 740 ft, gbo. Humble-Marland's Warren 1, Hockley, dr 2673 tf, gbo.

JEFFERSON COUNTY—Gulf's Bordages 3, Fannett, baied salt water 5329 ft, will deepen. Houston Oil Co.'s Fitzhugh 2, Big Hill, dr 3131 ft, lime rock and pyrites. J. O. Davis et al's Gladys 1, w of Spindle Top, dr 120 ft shale. The Texas Co.'s Garrick 1, n of Spindle Top, dr 4965 ft, shale.

MATAGORDA COUNTY—Gulf's Craig 8, Hawkinsville, abn 5092 ft; Sanborn 3, Hawkinsville, dr 3370 ft, hard shale and lime; Parkinson 3, Hawkinsville, abn 962 ft, cap rock.

MONTGOMERY COUNTY—Brain et al's Fitch 1, Spring, sd 2350 ft.

NACOGDOCHES COUNTY — Steine & Lewis' Birdwell 1, sd 1080 ft.

ORANGE—J. T. Miller Drlg. Co.'s Brown-Occultcee 1, Gum Island, dr 3650 ft, shale. W. C. Wells' Stark 2, Adams Bayou, dr 3583 ft, gbo and lime.

WASHINGTON—C. A. DeWare's Lehmann 1, Brenham, sd 2730 ft. Pratt-Hewitt's Konieczny 2, Brenham, dr 3272 ft, gbo. James Smith et al's Pomacal 1, Mill Creek dome, set 8-in cas 175 ft.

SOUTH LOUISIANA

CALCASIEU PARISH—Union Sulphur Co.'s Fee 720, Sulphur dome, sdtr 4392 ft. Dr. Hintze's Beckenstein 1, Sulphur dome, will test 19 ft oil sand 4260 ft. Border Research Corp.'s Cal. Lake 1, dr 4950 ft, gumbo. Gulf's Lutcher-Moore 5, Starks dome, sandy shale showing oil 4751-61 ft, set 6⅝-inch 4744 ft; Ind. Lbr. Co. 1, Starks dome, dr 3994 ft, sand.

CAMERON PARISH—Pure's Sweet Lake 5, Sweet Lake, dr 4001 ft, gumbo; Sweet Lake 4, Sweet Lake, dr 3518 ft, water sand. Yount-Lee's State Land 4, Hackberry, dr 4356 ft, rock; Gulf Land 10, Hackberry, dr 4294 ft, rock. Calcasieu Oil Co.'s Caldwell 1, Hackberry, dr 1786 ft, gumbo. Border Research Corp.'s Mallard Bay 1, dr 2785 ft, gumbo; Sabine Lake, dr 1690 ft, gumbo.

EVANGELINE PARISH—Ville Platte Pet. Co.'s Fentenot, Ville Platte, sd 1612 ft.

JEFF DAVIS PARISH—Estropal Oil Co.'s Le Doux 2, sd 2980 ft.

IBERIA PARISH—Gulf's State Z-2, Eagle Point, sd 1368 ft. Calcasieu Oil Co.'s Schwing A-1, Eagle Point, sd 3001 ft. Border Research Corp.'s Vermillion Bay 1, dr 1859 ft, shale.

ST. MARYS PARISH—Border Research Corp.'s Grand Lake 1, sd 4519 ft; West Cote Blanche 1, dr 670 ft, sand and gravel.

W. R. Shepherd has been appointed district manager for this region for the United Iron Works of Kansas City. Mr. Shepherd has been district manager for the Continental Supply Company with which organization he has been associated for the last nine years.

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Towering presses, giant rolls, huge equipment—all the enormous machinery of a modern plant completely equipped to give quantity production of heavy steel plate construction are so placed in the P. I. W. shops as to give high efficiency and low manufacturing costs.

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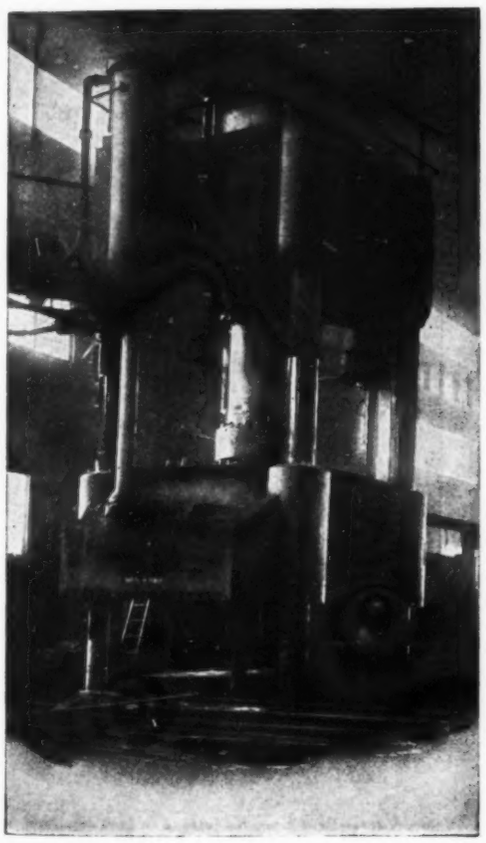

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Rocky Mountain Development Notes

Midwest Drilling Deeper In Colorado Test

Denver, Colo. — Midwest Refining Company is drilling deeper in its Ellis County wildcat, Kansas, after having had a very nice showing of oil at 3192 feet. Well is known as No. 19 Reidel, southeast section 27-13-16. When showing was encountered it was reported that drill had barely penetrated the Oread lime in which production has been encountered in other wells east of this test after having drilled some 50 feet into it. Oil is said to be of a high grade, running from 40 to 42 degrees. With the Midwest, the Phillips Petroleum Company, the Sinclair Oil & Refining Company, the Gypsy Oil Company the Oil Lease Purchase Association, Marland Oil Company and Texas Company all hold acreage on the structure, Walker Dome.

Eleven Leases Granted

Cheyenne, Wyo. — State Board of Land Commissioners granted 11 oil leases last week, including one to the Ohio Oil Company in the Salt Creek field, for 10 acres on section 16-40-79. Requirement is that enough wells be drilled to offset all tests on contiguous premises producing oil or gas in paying quantities.

Annual Stockholders Meeting

Casper.—Annual meeting of stockholders of New York Oil Company was held in Casper June 6. Officers and directors chosen are as follows: Emil H. Steiger of Oshkosh, Wis., chairman of the board; D. A. Curtis of Jamestown, N. Y., president; Heman D. Curtis of Thermopolis, Wyo. treasurer; Maxwell W. Winter of Casper secretary, Harry P. Hynds of Cheyenne, Wyo., first vice-president; Minal E. Young of Casper, second vice-president and general manager; A. G. Setter of Cattaraugua, N. Y., third vice-president; Harriet C. Curtis of Jamestown and W. G. Case of Buffalo, directors. Retiring members of the board are R. S. Hutchinson of Oshkosh, Wis., and E. J. Sullivan of Casper.

L. J. Whitney of Los Angeles, secretary-treasurer of the Perkins Oil Well Cementing Company, visited in Casper and the adjacent oil fields this week while in this region making a trip through the Rocky Mountain territory.

Charles Lackey Well Shut Down

Rock Springs, Wyo.—Charles Lackey Syndicate well between LaBarge and Big Piney fields which created so much excitement here last week is shut down awaiting the arrival of tankage and other equipment. Lackey says he has the biggest well in this territory. Location is on west one-half of northeast one-quarter section 12-28-114. A heavy gas flow in the upper three feet of the pay shot the bailer out of the hole and over the top of the drilling mast, according to report, and drilling was stopped eight feet in the sand by increasing amount of oil.

Colorado Well Drilling in Pennsylvania Sand

Denver, Colo. — Foley & Goldsworthy's Government 1 in Las Animas County, Colorado, is apparently drilling into the Pennsylvanian sand, and hence is creating no little interest in the southeastern part of the state. This test has passed through a horizon which has been classed by some as being the granite but a careful analysis of the cuttings has convinced the operators that the horizon is a bed of arkose, or disintegrated granite, and not the true granite which generally is accepted as exhausting oil possibilities. Result of the conclusion is that southeastern Colorado and the Government 1 test in particular, offer more encouraging prospects at present than at any time in the past. The well is located on Model Dome, section 11-30-60, and is now drilling below 1500 feet.

Prairie Abandons Three Wells in Wyoming

Lander, Wyo.—Prairie Oil & Gas Company is abandoning three tests in the Little Buffalo Basin district about 40 miles southeast of this town, in Fremont County. No. 1 well, southwest section 17-27n-95w, was abandoned at 1075 feet; it has a showing of oil and considerable gas but later later developed water. It was started originally by Sage Creek Petroleum Company and later taken over by Producers & Refiners Corporation. The No. 2 well, same section, was abandoned at 2685 feet; it also had a considerable showing of oil and gas, but after an attempt for some time to produce it, water resulted. The third test in the district, No. 1 northeast section 19-27n-95w, was drilled as a validation hole and abandoned at 510 feet. All operations in this field were at one time conducted by the Producers & Refiners Corporation and later taken over by Prairie when it acquired control of the P. & R.

Study Natural Gas Possibilities

Rock Springs, Wyo. — Reliable reports here are to the effect that the recent visit of Dr. E. Binney of Yale, and Victor Cotner, petroleum geologist and engineer, to the Baxter Basin field, was in connection with an investigation as to the natural gas possibilities in the district. It is understood that if their recommendations are favorable, and a gas line is laid from Baxter Basin to Salt Lake City, the interests for which Messrs. Binney and Cotner made the examination will install an absorption-type gasoline plant in the Baxter Basin field in connection with the proposed gas line to Salt Lake City.

Shale Plant Starts

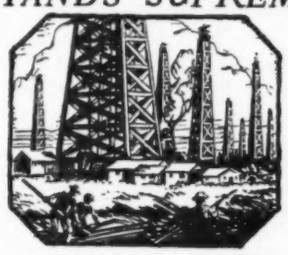
DeBeque, Colo.—Washington Shale Oil & Products Company was placed in operation for a short time last week with very satisfactory results. The plant made a test run through its new shale plant near this town last January with a view to discovering minor defects resulting from installation, and was then shut down. Plant is 14 miles north of DeBeque, on Roan Creek, and is equipped with the Ginet type of retorts.

Safety Man at Casper

Casper, Wyo. — U. S. Bureau of Mines has a safety engineer, M. F. Leopold, in Casper this week making moving pictures of various operations in this district in the oil fields, such as cable tool drilling, pipeline transportation, refinery operations, and loading methods. Pictures are being made in co-operation with American Petroleum Institute and will be shown with other pictures in the "Story of Petroleum" which is to take the place of a similar film made a number of years ago by the same agency in co-operation with the Sinclair interests.

P. J. Quealey, one of the organizers of the Producers and Refiners Corporation, has been taken from his home to Salt Lake City for special medical attention for an ailment he has suffered from recently.

ASCO STEEL
STANDS SUPREME



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Standard Work Has Helped to Teach Industry Cooperation

(*Continued from page* 28)

United States rose to dominance. But we know Russia possesses enormous oil resources. We know that the present Russian government hopes to turn these petroleum resources into financial support for its desperately weakened economic establishment. We may be sure that before many years Russia will somehow become once more a first-class power in petroleum.

Then glance to the south of us, and just over the horizon of the Caribbean we see Venezuela, with a potential production as great as was that of the United States only a few years ago. We recognize the assured possibilities of Columbia. On the other side of the world, in the great Persian-Mesopotamia area of the Middle East, we find still another factor of potential and enormous competition.

We know that since the war more of governmental and industrial energy and effort has been devoted to seeking out the world's resources of petroleum than to any other field of industrial enterprise. And we may not close our eyes to the fact that this search has so far succeeded as to bring the world's petroleum industries face to face with conditions which certainly dwarf the significance of a few local and temporary phenomena of over-production here in the United States.

This is a situation in which we may well invoke the serious thought and earnest co-operation of both political and industrial statesmanship. It does not concern merely a single American industry; it has vitally to do with every power - making, power - using, power-dependent interest in this twentieth century world. It not only deserves to be recognized as of these gigantic proportions, but it demands to be considered and dealt with in the light of such a view as I am here roughly sketching for you.

Conditions Demand Thought

If ever there was a world-wide industrial situation that merited, indeed required, to be dealt with in the broadest and most understanding fashion, it confronts us today. We need, and we are entitled to, the support and assistance of our government in visualizing and dealing with this world condition. For one, I believe there is vision enough, and liberality enough, among our leaders of national policy and industrial programs, to initiate measures adequate to cope with such a situation. I believe we should take this picture, with its details filled in by men better equipped than I am, to those instrumentaltalities of government which have to do with such problems as these. We should bespeak their help, their co-operation, and their authority in dealing with the international phases of these affairs. For one, I do not doubt that the Federal Oil Conservation Board, and the national administration, if this entire condition be frankly and effectively presented, would be ready to join with us in a far-reaching constructive program aiming to avert an economic disaster of international proportions and the gravest character.

The problems involved in making fundamental changes in our present system are innumerable. Present practice bristles with faults and weaknesses. Yet too sudden or too radical departures might mean either exhilaration or financial disaster to your company or mine. The truth is that necessity has forced us to seek knowledge which only scientific investigation and practical research can develop. Without the knowledge of facts, no one can offer any constructive plan with the slightest hope of its adoption either by the oil industry or by the government.

First, Know the Facts

We should at once proceed co-operatively and collectively to do what many of us are, after a fashion and unrelatedly, doing individually. The units of the industry should put into the Institute, as a central reservoir, all the known scientific facts about oil production which they have individually developed. And through this medium the whole industry should be correctly informed of the knowledge gained by practical research and experimentation, so that individual units might carry on similar work or adapt their methods to conform to new knowledge.

Candidly, I have no panacea to offer. I have, as you have, many ideas and many opinions. I agree with a lot of oil men and disagree with a lot of others, just as you do. Without adequate knowledge based upon provable facts I cannot translate my opinions and ideas into actualities—nor can you. But I am positive results will be obtained by evolution and never by revolution. The educational program now under way must be continued and expanded as was and is now the case in our standardization work. Gradually as the industry learns the truth, one intelligent step after another will be taken, the results showing with remarkable speed once a start is made.

Need to Save Gas

Personally, I am inclined to think that it may be necessary to recommend that State legislation be had through the medium of a simple bill to prohibit the escape of gas into the air except during drilling, completion and testing of the well. The reason is obvious. The advantages and disadvantages should be discussed and weighed to see if the result would adequately compensate us, as sooner or later the industry may be urged to act in this direction. But this should only be adopted as a last resort after decision is reached that co-operation within the industry in this direction is impossible and hopeless.

Nothing is ever gained by becoming hysterical. At present we all should be calm and keep cool, taking our medicine for whatever economic sins of omission or commission we may have committed, which contributed to make conditions as they are.

In conclusion, I desire to take this opportunity to urge upon the operator and producer in our industry the importance of now adopting the A. P. I. standards. Those who have not already done so, please start immediately by obtaining handbooks of A. P. I. standards and issuing instructions to your staff that they are to be adopted with as little delay as may be consistent with good business. You will be surprised at the slight cost in making the change. We have tried it and know.

Logan County, Okla., Test Makes Wet Gas

Tulsa. — The Wood, Gilbert and Wood, Gragg 1, in the northwest of the northwest of the southeast of 16-18-4w, Logan County, is making 16,300,000 cubic feet of wet gas from sand picked up at 3994 feet. This well is two miles from the T-P discovery well of the county in the southeast of 28-18-4w.

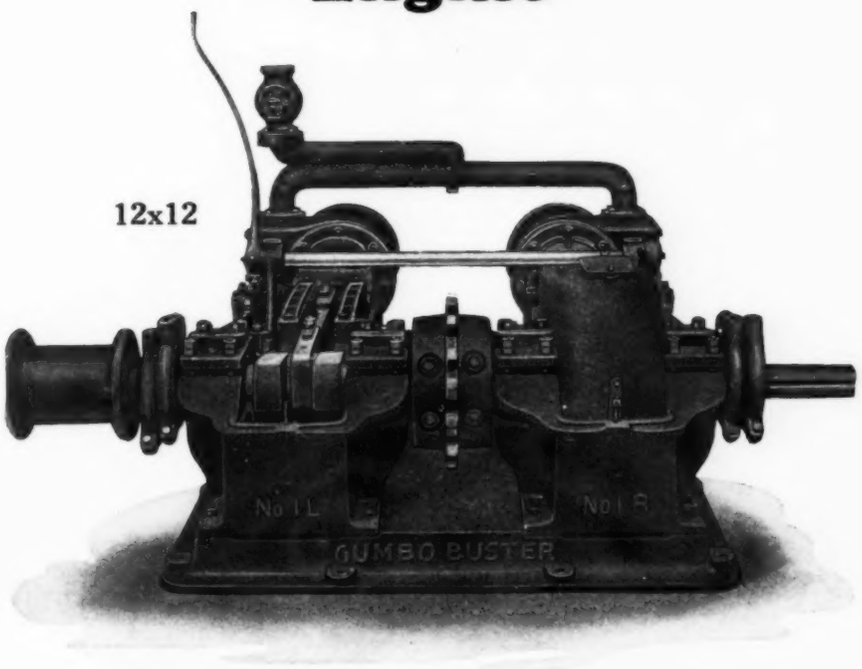
The next test due in Logan County is the Roxana Petroleum Corporation's McCulley 1, in the center of the northeast of the southeast of 30-19-4w, which is drilling in lime at 5796 feet. The Wilcox is expected just below the lime. Storage tanks are being erected and preparations are being made for production.

The Bryan & Emery Scott 1, in the northwest of the southwest of 33-19-4w, has resumed drilling at 4200 feet after being shut down for a week.

Harris & Haun of Blackwell have announced that they will drill a deep test in section 11-18-4w.

Tulsa.—The Continental Oil Company, a Colorado corporation, which includes territory from Texas to California in its operations, made net earnings in 1926 of $5,029,660, as compared with $4,306,474 the previous year. After paying $3,620,000 in dividends, $1,409,660 was carried over as surplus.

Compare the Gumbo Buster Twin Engine Point By Point With Any Other Drilling Engine



Your attention is especially directed to the solid, one-piece, double throw, steel forged crank shaft, which rests in Four Main Bearings, assuring rigidity under most severe drilling conditions and reducing vibration to a minimum. Cranks forged on quarters, eliminating dead centers.

Other Advantages—

1. Cat head for setting up and tearing down.
2. Oil bath.
3. Valve rigging on outside.
4. Ample power eliminating jerk and strain.

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Tubing
Casing
Line Pipe
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Sold Exclusively by

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OIL AND GAS WELL SUPPLIES
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An Oil Saver PAR-EXCELLENCE

The Larkin-Rigby

Made in three styles: Common, California and Automatic

SAVES TROUBLE because the automatic unlatching feature prevents breakage often experienced in the set screws of old style savers.

SAVES TIME by automatically latching into place and unlatching when rope socket or swab strikes it.

The **Larkin-Rigby Oil Saver** is twenty years ahead of the old style saver as many users know. If YOU don't know —a single "trial" **Larkin-Rigby** will give you, we believe, an experience more satisfactory than you have ever had in using this type of equipment. You'll not get soaked with oil while tightening or loosening the set screws of this saver. Check up on this. Buy just a single **Larkin-Rigby** for trial and compare it with other oil savers.

Manufactured only at Butler, Penna.,

LARKIN & CO

Sold by Leading Supply Stores

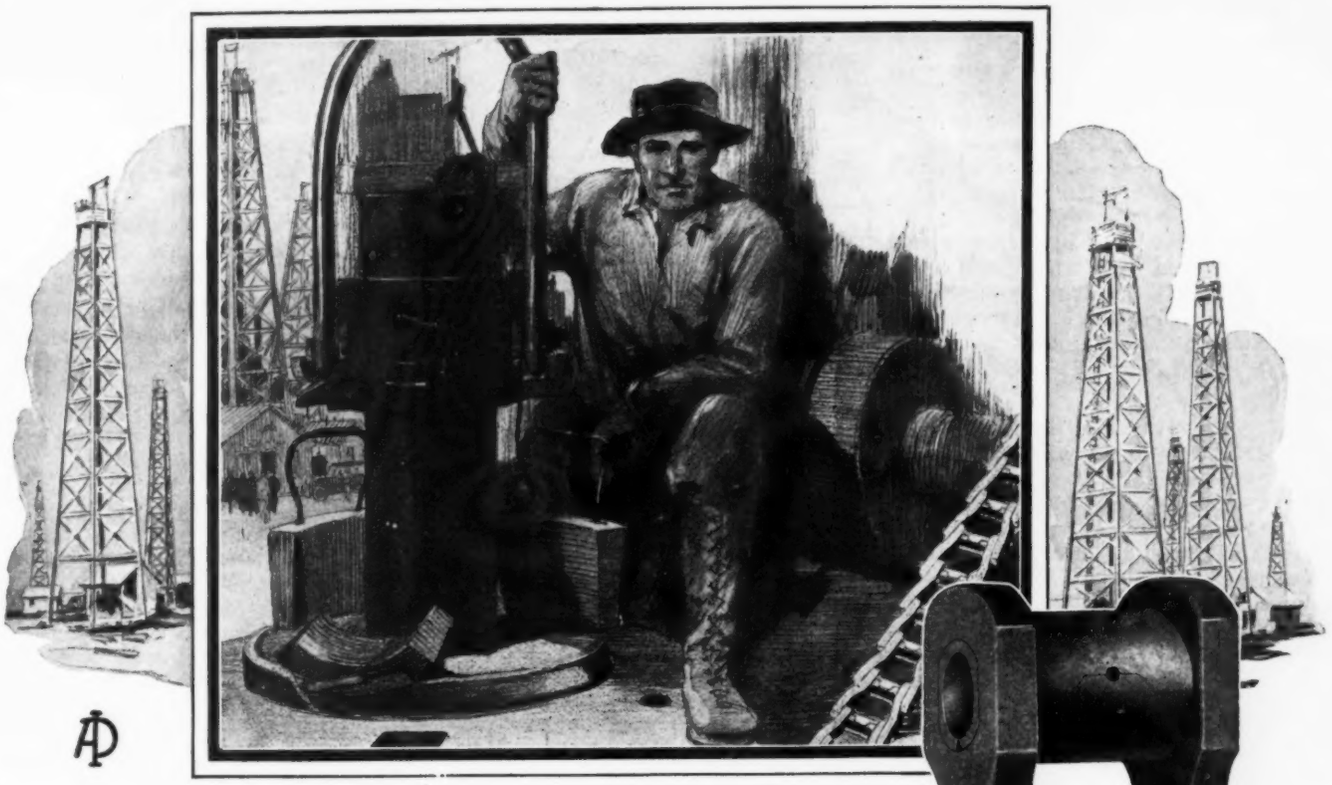
UNIFORM, Strong, Ductile; Sound in wall and weld. A durable, dependable material for every wrought tubular requirement of the Oil Industry. Made by an organization with nearly sixty years' manufacturing experience and under the supervision of a corps of technical and mechanical experts. Send for Booklet—"Plain Facts about Casing, Drill Pipe and Tubing"—dealing with practical ways of using such materials. Included are a number of tables of useful data for oil men.

NATIONAL TUBE COMPANY, PITTSBURGH, PA.

Development of the Oil-Burning Locomotive

Experiments using oil as a locomotive fuel were made in Pennsylvania shortly after the discovery of the famous Drake well in 1859, but the relatively high price of oil, production being limited virtually to the Appalachian region, as compared with less expensive Pennsylvania and West Virginia coals in the same region, prevented the continuance of its use at that time, states E. B. Swanson, economic analyst, in Information Circular 6017, recently issued by the Bureau of Mines, Department of Commerce. The first experiments in the United States which resulted in the continued utilization of oil as a locomotive fuel were made by the Central Pacific Railroad (now a part of the Southern Pacific system) at its Sacramento, California, shops in 1879, when oil brought by boat from the Atlantic Coast was burned in the fire box of an eight-wheel locomotive built to burn wood, but at that time using coal. The Atchison, Topeka and Santa Fe Railway Company began its experiments in 1894 and shortly thereafter converted all of its engines operating west of Winslow, Arizona, to oil burning. Crude oil production and refinery output of fuel oil in California had increased, by that time, to an extent sufficient to meet the local demands for oil as a locomotive and industrial fuel. The problems of burning and storing were met and the foundation laid for the increased use which followed when additional supplies were made available through the discoveries in Kern County in 1899.

The discovery of oil in quantity in Kern County, California; bringing in of the Spindle Top field in Texas and the development of crude oil production in Mexico were three almost simultaneous events which forecast the increased use of oil as a locomotive fuel. The technical pioneering had been accomplished and these discoveries resulted in a supply adequate for the extension of its use. Crude oil production in California increased from 2,642,095 barrels in 1899 to 24,382,472 barrels in 1903. By the discovery of the Spindle Top or Beaumont district on January 10, 1901, crude oil production in Texas increased from 835,039 barrels in 1900 to 4,393,658 barrels in 1901 and 18,083,658 barrels in the following year. Discovery of oil, virtually at the same time, in California and Texas furnished an adequate supply at both terminals to the transcontinental railroads operating between Texas and California, simplified the distribution problem and facilitated greatly the introduction of oil as a fuel. While the Mexican discoveries did not increase the supply of crude oil available to the United States at that time, they did lead to the burning of oil on Mexican locomotives in 1901 and, at a later date to the shipment of Mexican



No Drilling-Rig is Stronger Than the Chain That's On It

LINK-BELT SS-40 Plus and SS-124 Plus Oil Field Drive Chains, have earned an enviable record for dependability. They have stood up under the most grueling tests the oil fields could give.

Years of experience have taught operators and drillers to expect extra dependability from Link-Belt chains, and they are seldom disappointed. Look for our trade mark.

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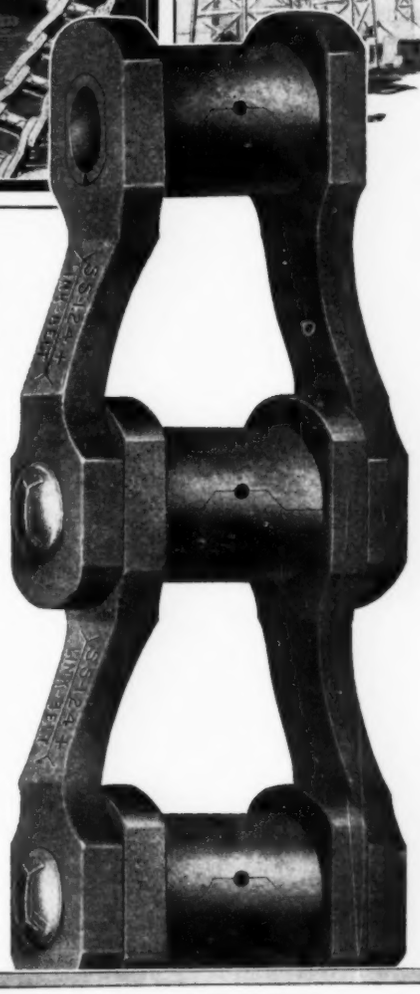
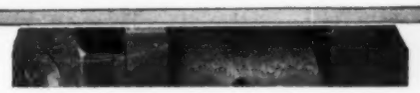


LINK-BELT

SS-40+(Plus) Sprocket Chain SS-124+(Plus)



Say you saw it in The OIL WEEKLY

topped crude to the United States for use as a locomotive fuel.

Conversion from coal to oil burning was accomplished readily in California as there were no coal deposits commercially available within the state at that time and it was necessary to import coal from British Columbia and Australia. For the railroads of south and west Texas, the long haul from coal fields producing a suitable quality of locomotive fuel; the ample production of Texas oil fields; and the availability of Mexican oil at Gulf ports made the change to oil burning especially attractive.

The Southern Pacific lines in Texas began the use of oil for locomotive fuel shortly after the Spindle Top discovery. After a period of experimentation extending from 1901 to 1905, these lines rapidly changed over all their locomotives from coal to oil, the complete change being effected about 1906. In California the demand for oil increased steadily during the ten years following the Kern County discoveries and the railroads operating locally in that territory converted all of their locomotives to oil. By 1910, the oil demand and supply were virtually in balance. Hardly had this balance been reached, however, when the Lakeview gusher opened new sources of supply and made possible further extensions in the use of oil as a railroad fuel. Oil was introduced by the railroads having their western terminals on Puget Sound, especially on those divisions which traversed the heavily wooded sections of the Cascade Mountains where the use of oil, it was felt, would reduce the fire hazard.

Some apprehension as to the available supply of fuel oil was felt in 1914 and 1915, when the increasing number of automobiles caused a heavy demand for motor fuel. When it became evident that improving refinery technique would supply motor fuel without affecting seriously the supply of fuel oil, consumption again increased, stimulated at the same time by the possibility of importing Mexican fuel oil. The Florida East Coast Railway inaugurated the use of oil as a locomotive fuel on its lines in 1916, using Mexican oil. The Missouri, Kansas and Texas Railway placed its first oil burning locomotive in service in 1919, later in the year adopting oil as fuel entirely on its Texas lines, burning both Mexican and domestic oils. The flush production of 1923 in Southern California resulted in an increased use of oil by railroads of the Pacific Northwest, whose fuel oil supply was reduced during the scarcity period of 1920 and 1921 on the Pacific Coast.

Until recently, a considerable quantity of Mexican oil was imported for use as a locomotive fuel, but the railroads, with some important exceptions, are at present depending on the domestic supply for the bulk of their needs. Considerable quantities of California, Texas, Louisiana and Arkansas crude oil were burned as fuel in the past, without refining, but the present supply is, in the main, a refinery product, the fuel oil being that portion remaining after the crude oil has been refined, either by straight distillation or by cracking.

Shale Oil Now Available For Experiments

Washington.—Shale oil obtained in ment's experimental oil shale plant near Rulison, Colorado, is now available for distribution to laboratories that might be interested in conducting tests with such oils, the Bureau of Mines, Department of Commerce, announces. A Scottish-type retort and an American type of retort, known as the N-T-U, are now being operated at the experimental plant, and oils from both types of retort are available for investigative work. The Bureau of Mines is anxious to distribute this shale oil as widely as possible in order that studies may be conducted by universities, commercial laboratories, and laboratories of oil companies. No charge will be made for the oil that is furnished, but the furnishing of samples is conditioned upon applicants for samples agreeing to furnish the Bureau with the results of all studies and tests on the oils.

The Bureau of Mines has no funds for furnishing containers for this oil or paying for the cost of transporting the oil to the railroad, or for defraying costs of railroad transportation. It is necessary, therefore, for those desiring samples to furnish the containers and to pay all costs of transportation. As the work of furnishing samples will have to be conducted in connection with the operation of the plant, it is desired to limit the size of sample to not less than five gallons, and shipments of not less than one drum will be preferable. The maximum amount of oil that can be supplied to any one applicant will be determined largely by the total amount of oil requested by all applicants.

The experimental oil shale plant is located one and one-half miles from Rulison Station, Garfield County, Colorado, on the main line of the Denver and Rio Grande Western Railroad. Applications for samples of shale oil should be addressed to M. J. Gavin, Engineer-in-Charge Oil Shale Investigations, U. S. Bureau of Mines, Rifle, Colorado. Requests for samples should state whether oil is preferred from either the Scottish or the N-T-U retort or from both. The Engineer-in-Charge will arrange for transportation of containers between railroad and plant, and return of filled containers to applicants. Local haulage charges will be billed directly to applicants by local draymen. Freight charges on empty containers going to the plant must be prepaid. Filled containers will be returned to applicants by collect freight or express, as desired.

Those desiring samples from this plant are requested to submit applications as promptly as possible, so the Bureau may have at an early date an idea of the total amount of oil to be supplied, and, if necessary, be able to determine how applications for large amounts of oil are to be pro-rated. Applications should state the purpose for which the oil is desired and the Bureau reserves the right to reject any or all applications which do not evidence good faith on part of applicant.

Brea-Olinda to Get More Play by Shell

Brea, Cal.—Following the showing made by wells in the old Birch Hill area of Brea-Olinda oil district, it is probable the Shell Company of California will attempt to develop further commercial production from the deep sand in that vicinity.

During the week ending June 11, this company put on production Fisher 5 for 950 barrels at 5125 feet and Pico 5 for 1050 barrels at 5050 feet. When the fact that this production is coming from one of the oldest producing fields in California is considered the showings made by Fisher 5 and Pico 5 are little short of phenomenal.

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The electric geophysical method of subsoil surveying.

Locating, defining the areas and determining the depth of petroleum deposits.

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Esperson Building **Houston, Texas**

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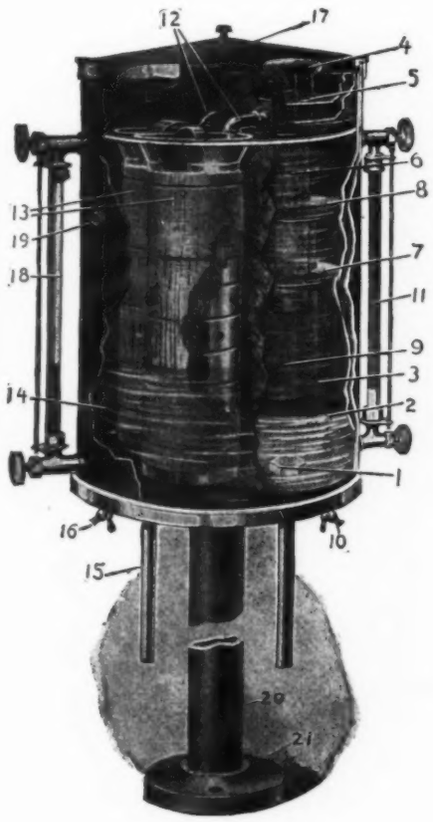
Continuously Clean!

For a great many years Bowser has given unusual attention to continuous purification of lubricants—long ago realizing that oil never wore out.

This long experience enables our engineers to be of more-than-ordinary help. The individual oiling and filtering system, shown here, continuously supplies 10 points needing lubrication—and the oil is clean.



Other and larger systems are available, too. Big or little, every system is backed by the Bowser name—short, with only six letters, but looming large in the minds of those who require dependable lubrication service.

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LUBRICATION ENGINEERS AND MANUFACTURERS
FORT WAYNE, INDIANA, U.S.A.

LUBRICATORS—OIL FILTERS—OILING SYSTEMS—ACCESSORIES
OIL STORAGE AND DISTRIBUTION SYSTEMS

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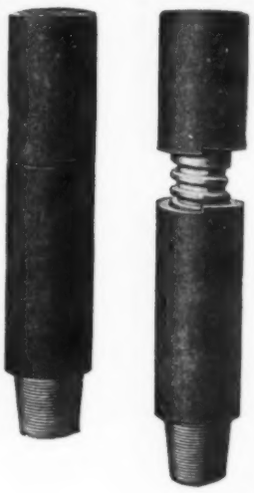
You Can't Stick Your fishing string With a



BAASH-ROSS Safety Joint

The Baash-Ross Safety Joint is a safety device of unusual merit. Useful in all fishing operations. Safety First! It is so constructed that it will not form a locked connection, and if the fish cannot be removed the string can always be rotated in reverse and backed-off, releasing the entire fishing string above the fishing tool. Furnished with right or left-hand threads to meet individual requirements, in sizes from 2" to 8". Particulars and prices on request.

"B-R" Real Service, 24 Hours every day

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SURVEYS
ESTIMATES OF OIL RESERVES

Analysis of Oil Field Underground Waters

Washington.—The importance of analyzing underground waters encountered in the course of oil-drilling operations, as a means of determining the source from which these waters come, is stressed by the United States Bureau of Mines, Department of Commerce. Water in the formations penetrated by an oil well hampers the production of oil in many ways. This water may be in the oil sand itself or in separate formations above or below the one that is oil bearing. Water decreases the productiveness of an oil sand, increases lifting costs, and at many wells forms emulsions with the oil. Although it is impossible to eliminate the "edge water" that occurs naturally in the oil sand, it is frequently possible to prevent other waters from entering the productive strata. In order to accomplish this successfully, one usually has to identify the water and locate the stratum from which it is coming.

In developing an oil-bearing area the producer often neglects to take samples of the various waters met, believing, no doubt, that each water will be satisfactorily shut off in every well and will therefore never give any trouble. However, the possibilities of water trouble are great, and as the field becomes older they increase. If water troubles then occur, it is always costly and often impossible to determine the exact source of the water unless analyses of the various waters found by the wells are available. To obtain and analyze water samples from drilling wells costs little, and is one of the cheapest and best forms of insurance against future water problems.

In some oil and gas fields the waters found in different strata differ markedly, and the identification of any sample is therefore easy. In other fields, however, different waters may be much alike; then water analyses are of value only if used with caution. In particular, correct methods of reporting and of interpreting the results of analyses must be used, so that all the essential characteristics of the waters will be given due weight and no unessential or misleading information included.

Identification of the water can sometimes be accomplished by means of dyes or by measurements of its temperature or of its electrical resistance. These methods are not generally applicable, however, and in fact may give misleading results. Identification by means of water analyses has proved usually to be the most reliable method. It is true, however, that information based on water analysis is not always infallible, for separate waters occasionally show the same chemical analysis and sometimes the chemical characteristics of the same water change. It often happens, too, that when separate waters have marked individual characteristics, the manner in which the analyses are reported conceals the differ-

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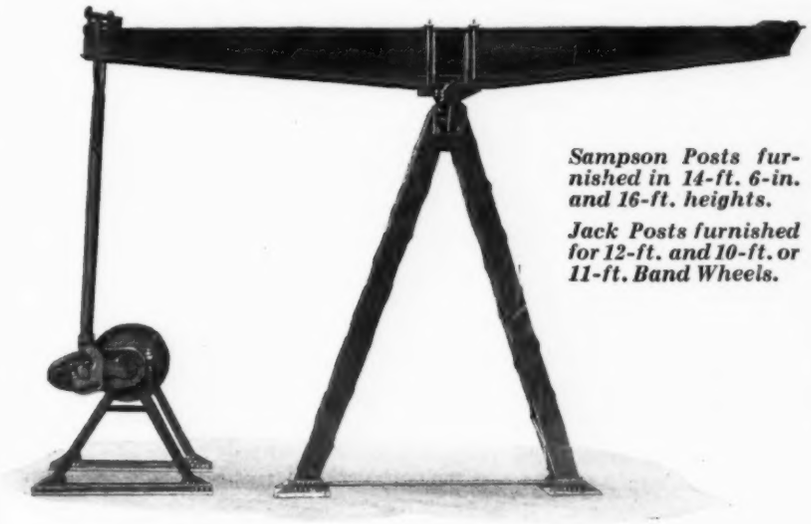
Check the equipment in which you are interested, tear out and return this page to us, and we will send complete information.



Sampson Posts furnished in 14-ft. 6-in. and 16-ft. heights.

Jack Posts furnished for 12-ft. and 10-ft. or 11-ft. Band Wheels.

Reduce operating expense with STEEL SAMPSON POSTS *and* JACK POSTS

PARKERSBURG "A" Frame type steel jack posts and sampson posts, set on concrete foundations, result in a permanent installation at low cost. This, because sills are eliminated.

Maintenance expense on these items is reduced to a minimum, due to the all-steel construction.

If moved to a new location, all material is salvable except anchor bolts in concrete foundations.

Parkersburg *All-Steel* Standard Rig Catalog (listed to the left) gives detailed specifications and will be sent on request.

The Parkersburg RIG & REEL COMPANY

Main Office and Works, Parkersburg, W. Va.

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Say you saw it in The OIL WEEKLY

BRONZEX IS the SOLUTION

If alkali or other elements make the life and usefulness of a steel ball uncertain—switch to BRONZEX —a ball and seat that is made to perform for a long period under such circumstances. Your dealer carries BRONZEX in stock.

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Products that cut down your underground overhead.

Everything *for the oil well*

Machine Tools

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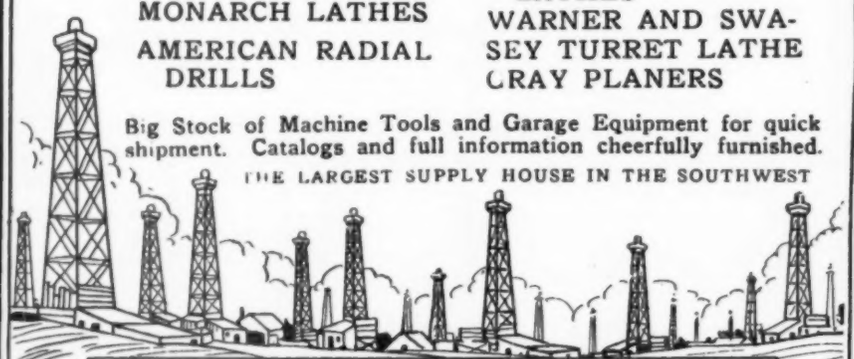
Big Stock of Machine Tools and Garage Equipment for quick shipment. Catalogs and full information cheerfully furnished.

THE LARGEST SUPPLY HOUSE IN THE SOUTHWEST



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HOUSTON – SAN ANTONIO – SHREVEPORT

ences from the petroleum engineer. Such systems serve the particular industries for which they were designed but lose their value when applied to others. For example, an analysis to determine the amount of chemical treatment necessary to soften water for boiler use is of little or no value in differentiating between the waters encountered in the production of oil. Unfortunately, petroleum engineers have too often attempted to use water analyses reported according to an unfit system and have found them of little or no value.

Most of the subsurface waters associated with oil-bearing formations have appreciable quantities of mineral salts in solution. Some waters are completely saturated; that is, they hold a maximum amount of the dissolved salts. Others, such as those encountered in the Rocky Mountain district, carry smaller amounts of salts, although even these waters have a much higher mineral content than ordinary surface waters.

In general, the chemists makes no attempt to ascertain any traces of rare mineral substances that might be in solution in oil-field waters. His practice is to determine only the more common substances usually present. No doubt this method often causes important facts to be overlooked.

Sodium and potassium are by far the most abundant of the alkali metals that are found in oil-field waters, and it is a general occurrence that the deeper waters contain larger proportions of these metals. The alkaline earths rank next to the alkalies and in many surface waters may exceed the alkalies. Calcium and magnesium, as a general rule, are the alkaline earths found in oil-field waters, and the usual practice is to determine only these two. In ground and surface waters, sulphates are usually present in large proportions. In the deeper waters the proportion of sulphates present generally decreases.

Chlorides are widespread constituents of terrestrial waters, but their concentration varies greatly. As the chlorides of all the common metals are highly soluble in water, they are not important as rock-forming constituents and are concentrated chiefly in the ocean. A high concentration of chlorides. Carbonates and bicarthat the water is partly of oceanic origin or has leached saline deposits. It often happens that the deeper water associated with oil sands shows higher concentration of chlorides. Carbonate and bicarbonates are found in most ground waters; the carbonates of the common alkaline earths are only slightly soluble, but the bicarbonates are readily soluble.

More detailed information in regard to the identification of oil-field waters by chemical analysis is given in Bureau of Mines Technical Paper 404, by C. E. Reistle, Jr., which may be obtained from the Superintendent of Documents, Washington, D. C., at a price of five cents.

Ed Hewitt, drilling contractor of Rockdale, was in Houston this week.

Old *timers know!*

The men who have spent years walking the derrick floor can tell you about Burns Dependability.

Through their years of experience, meeting with hundreds of tools . . . testing them where conditions are the worst, they KNOW the superiority of the Burns Tubular Temper Screw.

TEMPER BURNS SCREW

Always use genuine Burns parts for continued satisfying operation.

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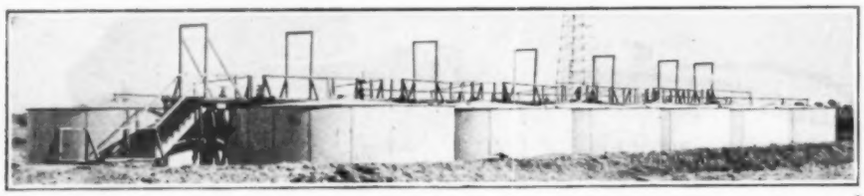

Conserve *GAS* as well as *OIL*

Ability to conserve valuable gas, which can be taken off and utilized by gasoline plants, is just another asset offered by MALONEY Tanks.

Decks, like sides, are 100% gas-tight—a result of our patented crimp and steel-channel reinforcement of seams, our special packing and Gaso Cement, and the heavy ladder and rafter deck supports. Vacuum-pressure valve equipment is the best available, with accurate, gas-tight valve seats.

MALONEY special pearl-gray paint, which deflects light and heat—is another important factor in reducing evaporation to the absolute minimum.

All Maloney Tanks are constructed of Keystone Copper Steel, the most highly rust-resisting sheet steel. The battery shown above is constructed throughout of 12-gauge sheets. This battery is on the Cudjo Farm of Tom Slick, Inc., Seminole.

Howell Aluminum "3 in 1" Vacuum Pressure Valve and Thief Hatch—
The BEST and LATEST Deck Equipment—POSITIVE Safety

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MADE OF KEYSTONE COPPER STEEL

Distributors at All Principal Petroleum Points
Sizes 12 to 3,000 Bbls.

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North American Exploration Company, Inc.

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Plan Oil Development in Ontario

Petrolia, Ont.—Recently a company was incorporated at Windsor under the title Ausoble River Oil and Gas Company, with a view to developing oil fields about Arkona, 20 miles east of Sarnia. At the end of April a meeting of all local oil men was held at Petrolia to discuss prospects of reviving the oil flow at Sarnia and Petrolia, at which it was claimed that only about 25 per cent of the oil in the field had thus far been obtained—24,000,000 or 25,000,000 barrels, whereas 50 to 90 per cent is available with a good mining process.

Cancels Kern County Drilling Contracts

Los Angeles, Cal.—Alleging that certain drilling contracts covered purely wildcat territory in Kern County, the receivers for the California Eastern Oil Company recently appeared in federal court in this city and asked that the contracts be canceled. Federal Judge McCormick issued the order for cancellation. The receivers also asked that a new lease be executed on Mormon Island, in the Los Angeles harbor. The lease on this island pertains chiefly to shipping privileges. No definite action was taken on the request, but a hearing will be given June 17.

The action of the court attracted much interest in Southern California as the company has a large number of stockholders in the immediate territory.

Suit Involves Island

Tulsa.—An island located in the Arkansas River and at the mouth of a small tributary in the vicinity of the new Churchill pool of Sumner County, Kansas, is the bone of contention between two oil operators, Sleigh and Champeney. Both lay claim to the island and have filed a suit in the courts of Sumner County to decide the rightful ownership.

The island, because of its proximity to several oil wells completed in that area, promises to become a valuable oil property.

S. P. Tschappat, General Manager of the Hercules Tool Company, Tulsa, Oklahoma, and wife left Thursday, June 9, for an extended trip through the East in the interest of his company and while there will visit his mother in Barnesville, Ohio, and other relatives in the east. Mr. Tschappat is driving through and expects to be gone four or five weeks.

Stronger, Wider CUTTERS That do not pull off

Guiberson Underreamer cutters have more stock in them, distributed where needed for the greatest strength.

Cutting edges have extra-width, thus eliminating tight holes, and making hole faster and with fewer dressings.

Cutters are held securely in position, both by the bolt and mandrel. Shanks are at all times contained within the body of the tool, thus preventing cutters from fouling in the hole.

These improved cutters have contributed to the GUIBERSON'S reputation for being "The world's STRONGEST Underreamer."

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GUIBERSON
BETTER BE SAFE THAN SORRY — GUIBERSON

Fundamental Criteria for Oil Occurrence

(*Continued from page* 44)

"sands." In other words, is the lensing of sands sufficiently considered?

8. The beds may stand vertically or approximately so, in which case the local structures may be so strong, so superficial or so "open" as to raise the question whether they can hold oil or gas.
9. If oil be present, gas may not accompany it; under which condition no natural means may exist to force oil into wells from surrounding portions of a productive stratum, rendering recovery expensive or impossible.
10. A source of origin, though present, may not be so related to porous beds that oil can have concentrated in them (as, for example, where the "mother rock" lies in a superficial formation, but the porous beds are thousands of feet beneath it.)
11. Volcanic or plutonic rocks may abound in the vicinity and the geologist must inquire whether they have favorably or adversely affected the presence of oil.
12. Oil or gas may be present but unsuitable for commercial use in available markets.
13. Geologic structures, though existing, may not embrace any of the well-known types in which oil is likely to occur in quantity. The structures must then be carefully studied to ascertain their value or bearing on oil occurrence.
14. Where artesian water exists under high pressure, it may have affected the concentration of oil adversely, but the mere presence of artesian water is not always unfavorable.
15. The position of the water level may bef avorable or unfavorable with respect to the local structure. This position may be determinable or it may be indeterminable from the surface investigation.
16. The age of folding of the oil rock may be so much later than that of the stratum itself as to have permitted undue hardening or desiccation of the oil or its alteration to torbinite, altertite, before the favorable structures for its accumulation were formed.
17. Oil may have removed in times past by human or natural agencies.
18. Sometimes topographic evidences of value exists, although in general unimportant or non-existent.
19. The formations may be of freshwater or marine origin. This is deemed by many to be a factor of importance.
20. The geologic "habit" of a region should be considered; for in some places there may be no observable single factor opposed to oil occurrence, yet some peculiarity of a criterion may be such as possibly to modify the existing factors and render the locality more doubtful or results.
21. The region may be subject to frequent or violent earthquakes. In some countries these have been considered unfavorable, and it remains to be shown how far this pessimism is justified.

This list of factors that may need con-

The Champion Direct-Connected Electric Blower

No. 30—Made in D. C. 110 Volts for the Oil Field

No. 30 Champion Direct-Connected Electric Blower has been especially designed FOR OIL FIELD WORK and will heat in double quick time any Well Bit used in the Oil Field.

The Motor is built especially for this work, as the shaft is heavy and the bearings long, making it a durable machine; the material used in its construction together with the workmanship is of the very best. Motor is enclosed to keep dirt from internal parts.

The Fan Case is designed to give a high pressure, and at the same time volume of air sufficient to heat any size Well Bit.

The Outlet of Fan Case has an opening 4⅞", but an Adapter is used on the outlet which has 4" standard thread pipe connection; therefore either a 3" or 4" pipe can be used from Blower to the Fire, as a reducer can be used to reduce to 3", but where extra heavy Bits are to be heated we would recommend using 4" pipe.

No.	Height	H. P.	R. P. M.
30	21	6/10	3500

Diam. Outlet	Diam. Outlet Pipe Connection	Weight
4⅞	4"	185

Built Purposely for Heating Well Bits.

Manufactured by

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The reason for our covering the oil business with three papers instead of one is obvious. The oil producer isn't interested in how the oil marketer increases the gallonage of gasoline at a particular station, nor is he interested in the technical problems of a refinery executive or superintendent. On the other hand, the refinery superintendent isn't interested in how to drill a well, and so on down the line.

This is a day of specialization. This is a day when the man doing a job well must study, primarily, his own work and needs. *The* OIL WEEKLY gives you news, comment, engineering articles, methods articles, and data on new equipment without burdening you with matter in which you have no particular interest.

—*that's why it is growing!*

Viking Twin Oil Pumping Units

Figure—15

FOR UNLOADING AND TRANSFER SERVICE

No. 2 Twin Outfit complete with 3 H. P. Gasoline Engine.

Capacity each pump 90 Gallons per minute.

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American Supply Co., Mexia, Texas
Standard Supply Co., Inc., Wichita Falls, Texas

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sideration is not an exhaustive one. The criteria are enumerated as a step in the complete diagnosis of an oil problem, and we all know, even with the most complete studies, that a decided possibility remains of the existence of some unknown, undecipherable but nnfavorable condition which may prevent the occurrence or commercial extraction of oil.

Remarks on the Secondary Criteria

A few remarks on the secondary criteria may here be of interest. Although faults may not be dangerous, they do interfere somewhat with the *distribution* of oil in structures. For example, in connection with water circulation it is evident that [14] "where the water movement is up the regional dip, a strike fault may cause accumulation on its down-dip side by offsetting the reservoir bed and thus forming a sort of anticlinal trap. By deduction, where the water movement is down the regional dip, accumulation would take place in the up-dip side of the fault provided the fault cuts across a plugging anticline in such a way that the passage around the end is not free, and provided the water movement is not rapid enough to cause flushing."

For half a century after the discovery of petroleum in the United States a belief prevailed that faults were unfavorable to oil occurrence. The popular superstitution against faults was so strong that for many years it permeated the geologic fraternity, some geologists remarking that certain prospective fields would never amount to much on account of the existence of faults. Even in reports of national and State geological surveys, some prospective fields were condemned because faults traversed them. In some countries this absurdity was expressed in the familiar words, "The country is too much broken up."

We now know that, under certain conditions, the presence of faults is actually favorable to the occurrence of oil. For example, Salt Creek field and Teapot Dome are traversed by hundreds of faults, some having hundreds of feet displacement. Wells of high yield are found in these fields in close proximity to faults and, in some places actually cut them. Other fields in which faults are conspicuous are Elk Basin in Wyoming, the Mexia fault belt in Texas, and many of the Oklahoma fields. We can thus say with authority that faults in themselves are not opposed to the existence of commercial oil; they may have furnished channels by which fluids have risen from deep-lying strata to those within reach of the drill, and they may have acted as traps to concentrate the oil in structure.

The importance of near shore conditions for oil *accumulation* has been sometimes stressed and this has constituted the subject of a paper before the Association.[15] The criterion was advocated on the basis of the supposition that the animals and plants from which oil is derived lived in shallow water or in the zone not exceeding 25 fathoms in depth. The uni-

[14] John L. Rich, "Further Notes on the Hydraulic Theory of Oil Migration and Accumulation," Bull. Amer. Assoc. Petrol. Geol., Vol. 7, 1923, pp. 213-25.
[15] E. B. Branson, "Near-Shore Conditions Important in Locating Petroleum Deposits".

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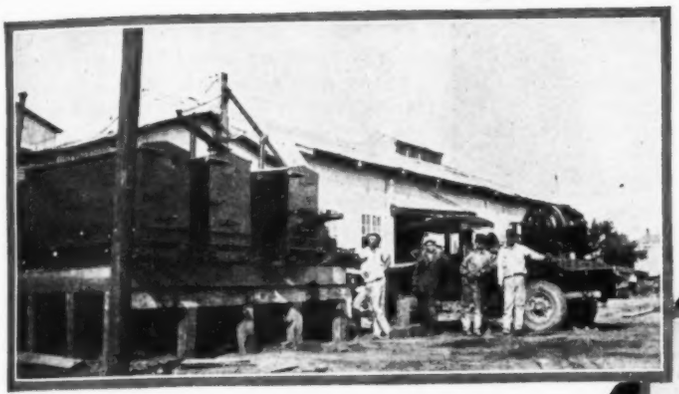

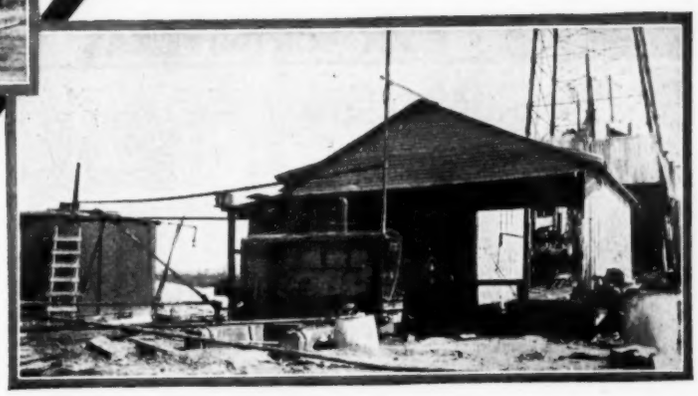

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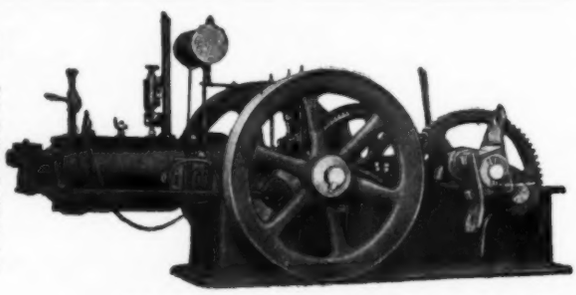

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versality of this criterion does not appear to have been established. If true it constitutes a phase of origin. In many cases oil probably originates under such conditions, but it may be formed in other palegeographic relations also.

Although not a criterion of oil *occurrence* in a given district, natural gas is a factor propelling oil into wells from surrounding portions of a stratum in cases where the wells would otherwise be considered "dry"; hence, the existence and pressure of gas for propulsion is of importance.[16] Where gas pressure does not exist the wells may not yield without pumping.

In most reports on oil field probabilities, little or nothing is said about tectonics or widespread earth movements. Yet tectonics have their value as secondary criteria. As an example may be cited the question of whether geologic conditions of New Guinea and New Zealand are similar to, or different from ,those in East Indian Archipelago where great producing fields exist. One can not hastily jump to the conclusion that, because widely separated districts lie in a definite recognized tectonic belt they must be similar geologically. If similarity exists throughout a belt it is an additional argument in favor of oil occurrence, whereas if the deposition, folding or faulting be of diverse ages from those in any known field, a report on the area would doubtless be less favorable.

Conclusion

This paper is not considered as covering the "secondary criteria." The few remarks made on those criteria are given merely to simplify the fundamental criteria enumerated, and the secondary criteria are to be made the subject of a later paper. This brief discussion of some of them will have illustrated their importance as a group and prepared the way for the later discussion.

[16]R. Van A. Mills, "Natural Gas as a Factor in Oil Migration and Accumulation in the Vicinity of Faults", **Bull. Amer. Assoc. Petrol. Geologists**, Vol. VII, 1923, pp. 14-21.

Burr Exposition Manager

Tulsa.—J. Burr Gibbons of Tulsa has been named manager of the International Petroleum Exposition and will take charge of the work at once. E. J. Quigley, Tulsa Chamber of Commerce, is assistant manager.

Burr Gibbons, a former newspaper man, is past president of the chamber of commerce and president of a local industrial concern. He will devote all of his time to Exposition interests.

Active work is going on at the Tulsa fair grounds, where the exposition will be held this year, September 24 to October 1, making ready for the forthcoming events.

New Fort Worth Office

Fort Worth, Texas.—American Steel Derrick Company, with headquarters at Tulsa, has recently opened an office at 2015 Fort Worth National Bank Building, with R. G. Weidman in charge.

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Trinidad Production

It is estimated that March production of crude oil in Trinidad had an increase of 2 per cent over the preceding month. Exports of crude during March came to 1,007,505 gallons, of which 1,004,339 went to the United States and the remainder to Venezuela. Fuel oil exports totaled 9,650,790 gallons, including 4,713,829 gallons for the United Kingdom and 2,329,607 for bunkers; most of the remainder went to neighboring countries. The United Kingdom took 1,801,755 gallons of gasoline and the United States 1,557,894; smaller exports, largely to neighboring countries, brought the total to 4,096,601 gallons. Kerosene exports came to 116,844 gallons, the largest being 41,502 to British Guiana, 36,110 to Porto Rico and 23,913 to British West Indies. There were also exports of 17,527 gallons of road oil, mostly to the British West Indies.

Automobile Production

New York.—Members of the National Automobile Chamber of Commerce in reporting shipments, indicate that motor production of these concerns has increased 10.5 per cent to June 1st as compared with last year.

TEXAS OIL MAPS
County and District Catalog on Application
HEYDRICK MAPPING COMPANY
Wichita Falls, Texas

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Field Gas Testing. Analysis of oil field brines, gas minerals and oil Soil Thermometers, Hydrometers and Laboratory Glassware
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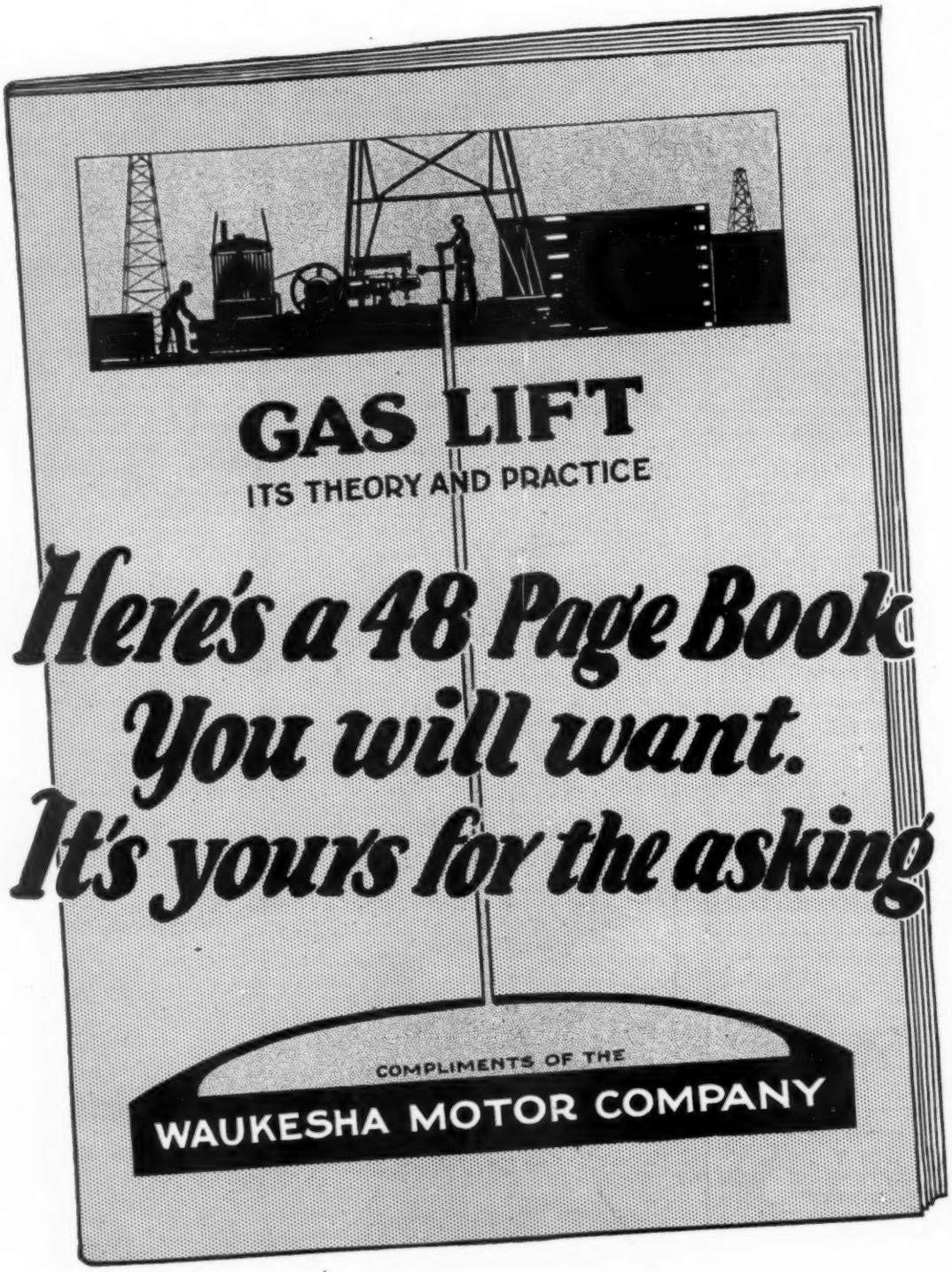

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OIL INDUSTRY EQUIPMENT DIVISION

WAUKESHA MOTOR COMPANY

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NEW EQUIPMENT, CATALOGS, BULLETINS, BOOKS

Oil Well Countershaft

ALLIS - CHALMERS MANUFACTURING COMPANY

Allis-Chalmers Manufacturing Company, Milwaukee, Wisconsin, is now marketing a Texrope Driven Belt Tightening Oil Well Countershaft for oil field work.

Each unit consists of the following parts: A cast iron base plate with countershaft mounted in Timken tapered roller bearings, slide rails under the base which provide a 16-inch adjustment and allow 32-inch stretch in the belt connecting the countershaft and band wheel, an Allis-Chalmers two-speed slip ring oil well motor with slide rails and control apparatus, a Texrope drive consisting of two grooved sheaves and seven specially constructed "V" type endless belts, and a steel shaft with suitable extension for mounting pulley and sheave.

The countershaft is grease packed, as is the motor.

Salvage value of the unit is practically 100 per cent. It can easily be picked up and moved to a new well.

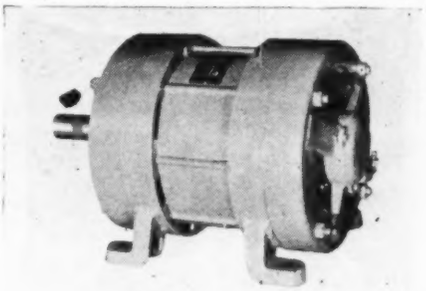
The base plate is made of cast iron and provides the support for the motor and countershaft.

Housing for the Timken tapered roller bearings extends the entire width of the base plate and is cast as an integral part of it.

Two grease cups on the top of the bearing housing provide lubrication for the bearings.

The motor is a two phase variable speed motor of the slip ring type. The speed at the 15 H.P. rating at 60 cycles is 575 r.p.m. and the speed at the 35 H.P. rating is 1160 r.p.m. The control apparatus is mounted on an angle-iron frame and consists of a pole-changing drum which is used to change the primary connections of the motor from low to high or from high to low H.P. as desired. The main drum controller is mounted above to the left and consists of a specially designed drum which takes care of the reversing and the speed changes. There are six speeds obtainable on low horsepower and six on high horsepower.

More information on this unit can be obtained from Allis-Chalmers Manufacturing Company, Milwaukee, Wisconsin.



LINCOLN ELECTRIC COMPANY MOTOR

New All-Steel Motor

LINCOLN ELECTRIC COMPANY

A new line of all steel, ball bearing, polyphase induction motors ranging in size from one to 100 horsepower in all standard voltages and cycles, is announced by the Lincoln Electric Company, Cleveland, Ohio.

Gray iron and malleable castings heretofore used in motors made by this company have been replaced in the new motor, with hot rolled steel.

Drop forged steel feet are welded onto the hot rolled steel and end rings of the motor. The end brackets or bearing supports are also made up of welded steel construction.

Large shafts and bearings have also been used.

Special ventilation features have been built into the motor also, thereby increasing its over-load.

More detailed information may be secured from the company on request.

Catalog Announcement

Gulf Coast Machine and Supply Company, Beaumont, Texas, and 316 West Building, Houston, has compiled a new series of pamphlets into a catalog, giving complete descriptions of many items of oil field equipment manufactured by this company.

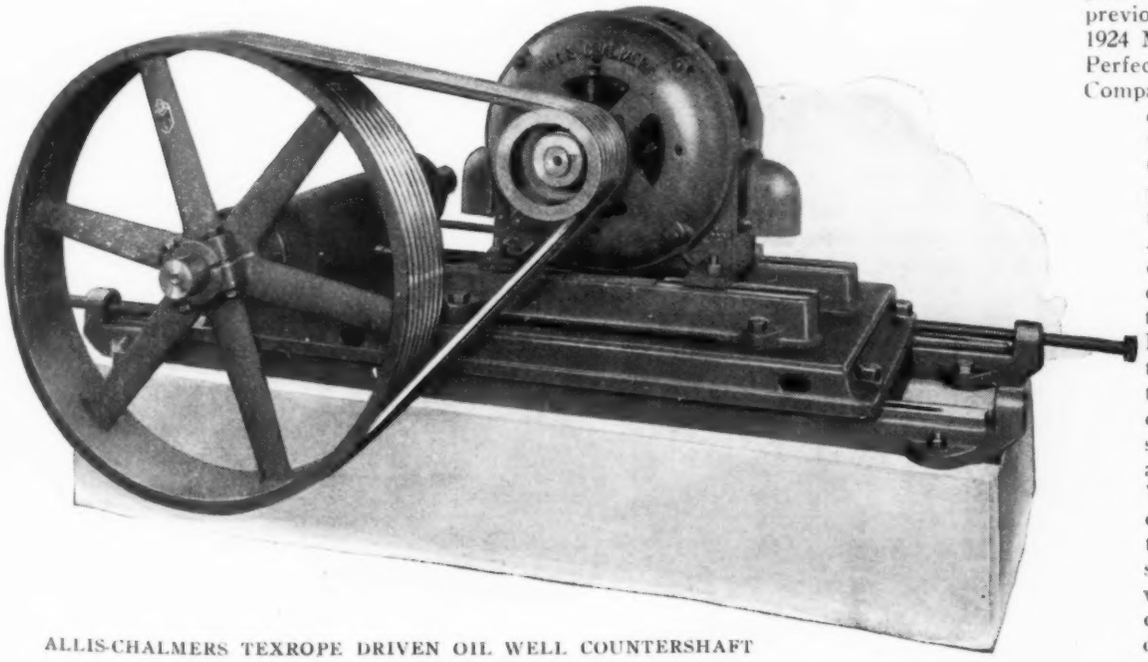
Gustin - Bacon Acquires Vacuum Business

Kansas City, Mo.—Announcement was made recently by officials of the company that the Gustin-Bacon Manufacturing Company has acquired by purchase of the business, including patents, dies and machinery of the Vacuum Control Company of Topeka.

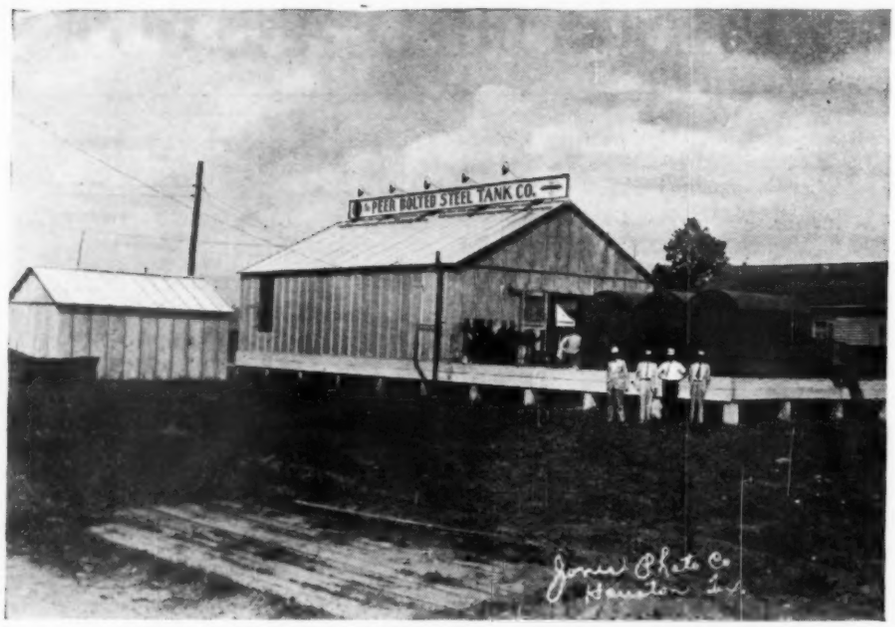
Buck equipment including valves, separators, and regulators will be manufactured in Kansas City and sold by the Gustin-Bacon organization through its Tulsa and Kansas City offices.

The addition of these products to the Gustin-Bacon lines of oil field supplies and other machinery, has made necessary the creation of a new department which will operate as the Vacuum Control Division.

Charles P. Buck, patentee of Buck products, joins the Gustin-Bacon company as manager of the new division. His connection with the oil industry dates back to 1912 when he became affiliated with C. E. Gault, of Topeka, who organized the Perfection Metal Products Company. In 1915 he offered the industry the first steel base tank which rapidly replaced wooden tanks previously used. In 1924 Mr. Buck left the Perfection Products Company and devoted his entire time to the Vacuum Control Company. He is a member of the American Society of Mechanical Engineers, the American Petroleum Institute, and during the war was chairman of the seventh Regional Division and Vice - Chairman of the 14th section of the resources and conversion division of the War Industries Board.



ALLIS-CHALMERS TEXROPE DRIVEN OIL WELL COUNTERSHAFT



PEER BOLTED TANK COMPANY'S NEW PLANT, HOUSTON, TEXAS

Tank Company Builds New Plant

Houston.—The Peer Bolted Steel Tank Company, with headquarters here has recently completed a new building at its plant.

This company represents Maloney Tank Manufacturing Company, Tulsa, and distributes bolted steel tanks, and rig irons.

Branches are maintained in the following Texas towns: Boling, Bruni, Guffey, Liberty, Myrtle, Noledo, Sour Lake and West Lake.

Offices in Houston are located at 531 West Building.

Thrift Corporation Holds Annual Meeting

Houston.—At the annual meeting of the Thrift Corporation, held at the company's headquarters here Friday, June 10, the following directors were elected for the ensuing year: C. H. Lane, A. L. Volmer, E. A. Hawe and S. W. Robinson of Houston, and W. P. Stiles of Shreveport.

Officers re-elected are: C. H. Lane, president; A. L. Volmer, vice president and general manager, and E. A. Hawe, secretary and treasurer.

The Thrift Corporation are manufacturers of the Thrift Hydraulic Casing Pulling Machine and other hydraulic equipment and accessories used in the oil fields.

1927 Petroleum Register

The 1927 edition of The Petroleum Register is now being distributed by The Petroleum Register, 40 Rector Street, New York.

The register contains over 600 pages of facts about oil companies throughout the world. There are also statistics of importance.

Producers of petroleum, refiners, marketers, and jobbers, natural gasoline manufacturers, pipe line companies, compounders, grease manufacturers, drilling contractors, etc., are listed and fully indexed. Information given includes personnel of organization, capital set-up, location of properties, digest of latest financial reports, etc.

Maps of the principal producing and prospective oil fields, statistics of production, consumption, imports, exports and other details about petroleum products are given. In one section is a directory of oil equipment and supplies, with names and addresses of manufacturers and dealers.

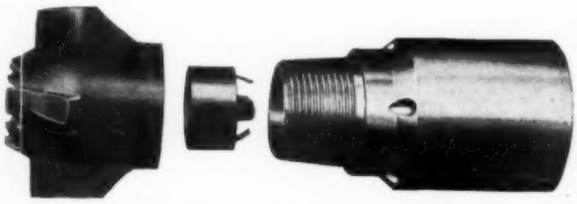
Copies of the register may be obtained from the Gulf Publishing Company, P. O. Box 1307, Houston, Texas. Price $10.

Two-Piece Core Bit

H. C. Smith Manufacturing Company, Whittier, California, had added to its line of equipment a two-piece core bit, a feature of which is the renewable cutting head.

The bit which is a development from the standard Phipps one-piece bit, is made of forged steel. It is recommended because of its quick renewability in places where facilities for rebuilding may not be readily available.

Additional information will be supplied by the company, on inquiry.



H. C. SMITH TWO-PIECE CORE BIT

Vulcan Corporation is Enlarging Plant

Tulsa—The Vulcan Steel Tank Corporation has under construction a new plant for the manufacture and erection of steel tankage, both pressure and storage. The vulcan plant will also supply light and heavy steel plate work for refineries and natural gasoline plants.

The new plant is located along the Frisco at the North Street road, Tulsa. The company's office is at the plant site.

A part of the same site, and also the same trackage, facilities will be used by the Southwestern Engineering Corporation for their new Tulsa plant.

The Vulcan Steel Tank Corporation's plant will be under the personal direction of J. F. McKelvey, formerly with the Pioneer Tank and Boiler Company. Other officers are J. S. Warren, vice-president; E. P. Day, secretary; L. N. McKelvey, sales engineer. R. B. Millard, associated with the Southwestern Engineering Corporation, is a director of the Vulcan organization.

Welding Company Opens Tulsa Branch

Tulsa.—The Big Three Welding & Equipment Company, Fort Worth and Houston, Texas, distributors for "Stable-Arc" welders made by the Lincoln Electric Company, Cleveland, Ohio, announce the opening of their third warehouse branch at No. 1 North Frankfort Street, Tulsa.

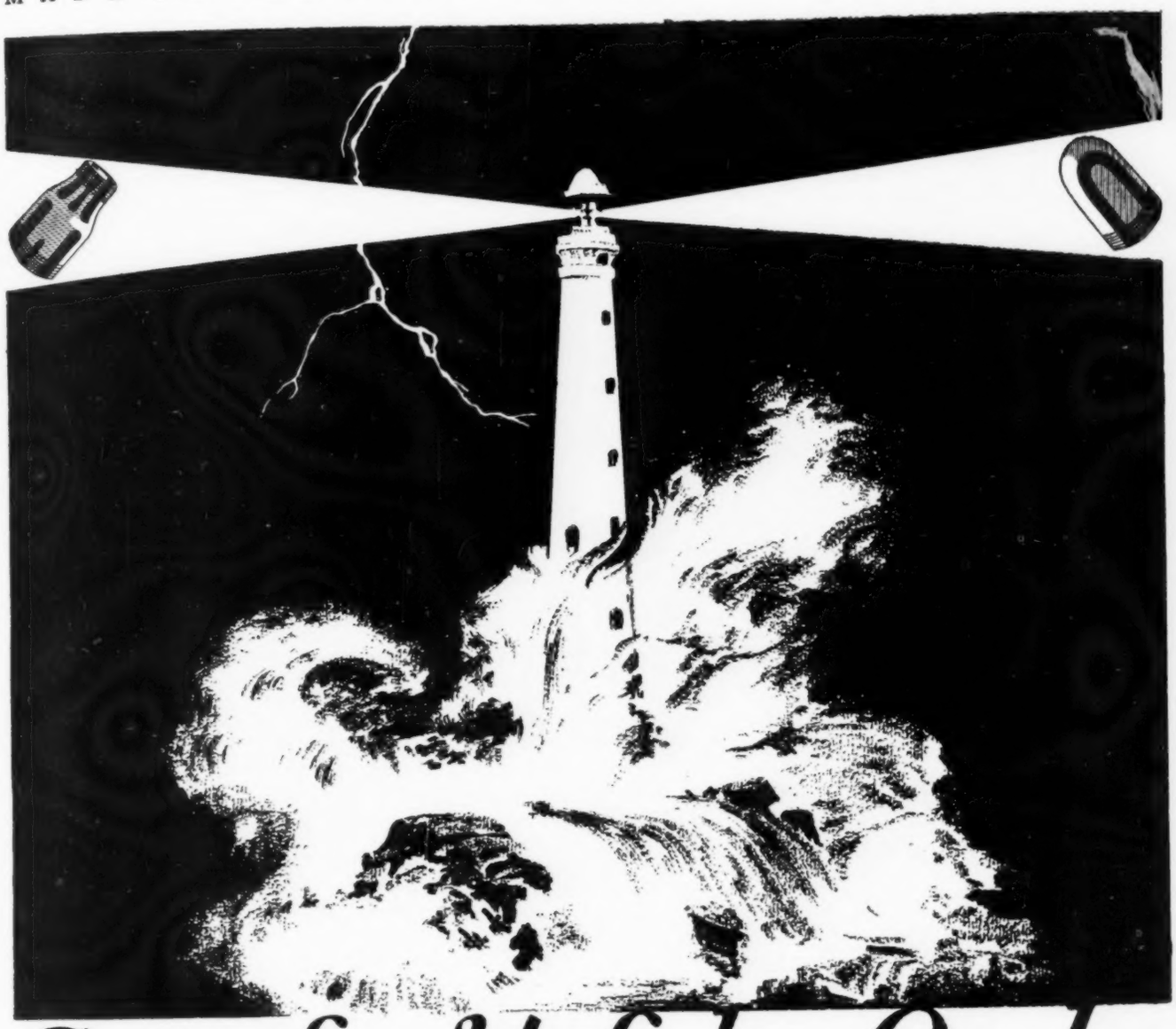
Stocks of Lincoln "Stable-Arc" welders and service parts are carried at all three branches.

At a recent meeting of the stockholders of the American Seamless Tube Corporation, Los Angeles, California, A. W. Campbell, formerly president, was elected chairman of the board. A. J. Carr, formerly vice-president, was made president, F. L. Fiesthamel was named vrst vice-president, J. A. McNamara was named treasurer, and C. A. Riley was elected secretary.

World's Tanker Tonnage

Tulsa.—The aggregate tonnage of the world's tanker fleet is 8,750,000 deadweight tons, and this figure will be increased in the near future by the construction of 142 vesse's now being **built in the shipyard**. This new tonnage tota's 1,305,150 tons. Only four of these vessels are being constructed in the United States. One of the four is a 15,000-ton Diesel engine driven vessel for the California Petroleum Corporation. The majority of vessels under construction in the foreign shipyards are for American owners or for foreign subsidiaries of American companies. The Diesel type is in predominance, 109 vessels being internal combustion type and 33 being steam driven.

MADE IN THE SHOPS NEAREST THE OIL FIELDS



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Say you saw it in The OIL WEEKLY

MANUFACTURER AND SUPPLY DEALER

Manufacturing Better Sucker Rods

By H. E. CASSIDY
D. & B. Pump and Supply Company

(Continued from last week)

THE present methods of fatigue testing require rather elaborate and specialized apparatus. None of this apparatus in present use will individually simulate all of the conditions which may occur in field use. It is probable that only in isolated cases can any machine or apparatus be made available which will even approximate working conditions of practice. This is particularly true in connection with oil well pumping equipment. In this particular case the only real test appears to be in the actual well.

Actual well tests involve a large element of time. To obtain useful data, tests must be conducted until failure occurs. Failure in the well incurs much expense from an operating point of view.

Even if laboratory equipment for accelerated tests can be devised, the overhead equipment and testing time involves much labor and expense. It would seem therefore expedient to make as much correlation as possible between fatigue limits and other well known and easily obtained physical characteristics of metals if such correlation is possible. This is particularly desirable for use as a guide in suggesting hitherto untried steels for which much data on static load characteristics are recorded.

Many fatigue failures are due to the unsuitable state in which steels are put into service. Correct knowledge of the nature and extent of the various stresses which are imposed on any member in service permits the raising of the fatigue range of a steel from 50 to 60 per cent, by suitably modifying the structure. The actual working conditions must therefore receive careful study and analysis so that the best advantage can be taken of structural change methods.

(a) Relation of Tensile Strength to Limiting Stress

According to F. W. Rowe, absolutely no correlation can be made between endurance limits and limits of proportionality, as observed in static testing, as was formerly thought to be the case. It had been erroneously supposed in the past that the fatigue limit was related to the static elastic limit or limit of proportionality and that once the static elastic limit had been passed, failure was bound to occur. As an illustration of the last statement, the example of pure copper may be cited. Copper has a very low elastic limit, below 2200 pounds per square inch, but its fatigue range is definitely about 12,000 pounds per square inch.

Rowe also states that only in the case of the tensile strength is anything approaching correlation possible and fatigue tests on hundreds of specimens of all classes of steel have shown that the ratio may vary from (Limiting stress) ÷ (Tensile strength) 0.35 to 0.60 under reverse bending stresses.

This means that for a steel having a tensile strength of 75,000 pounds per square inch, the endurance will almost certainly fall between the values + or — 26,200 pounds per square inch and + or — 45,000 pounds per square inch. However, reliable data published shows that 85 per cent of all cases show the ratio of (Limiting stress) ÷ (Tensile strength) to lie between 0.45 to 0.55. The steels from which this data was collected had tensile strengths varying from 56,000 pounds per square inch to 250,000 pounds per square inch.

Rowe also states that no great preponderance to a high ratio is shown by the higher tensile strength steels or vice versa.

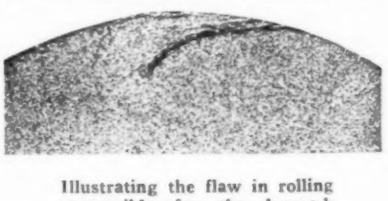
If the above statements are correct it would seem that a given steel having a tensile strength of 75,000 pounds per square inch and which was of reasonably good uniform quality, there would be only 15 per cent chance that its endurance limit would lie outside of 33,700 pounds and 41,000 pounds per square inch.

Two examples may be cited. A certain steel had a yield stress of 17,800 pounds and a maximum stress of 50,000 pounds per square inch. In the untreated condition it showed endurance limits (reverse bending) of + or — 23,000 pounds per square inch. Using "Heatreat" from 1600 degrees F. this same steel showed a yield stress of 40,600 pounds and a maximum stress of 63,000 pounds per square inch. In this condition the endurance limits were raised to + or — 33,000 pounds per square inch.

In another case the steel (containing 0.40 per cent C) as received showed a yield point and maximum stress of 38,500 pounds and 77,500 pounds per square inch, respectively. Its endurance limit was 34,000 pounds per square inch. With the "Heatreat" process the yield point and maximum stress were increased to 77,500 and 116,000 pounds per square inch, respectively. In this heat treated condition the endurance was raised to + or

Attention has been called to conclusions reached by Mr. Cassidy in his article last week, dealing with welded sucker rods. These conclusions dealt with the breaking of welded rods at the weld. We are informed that the experience of one company with welded rods, running over a long period of time, and involving several hundred thousand rods, is that the rods seldom broke at the weld—in fact, the weld appeared to be the strongest part of the rod.

We believe that Mr. Cassidy's article will be of much interest to users of sucker rods, since it deals not only with the manufacture, but the performance and care of rods. However, the article is printed as the experience of Mr. Cassidy and the organization with which he is connected, and we are sure that he will be glad to see discussion on it.—Editor.



Illustrating the flaw in rolling responsible for the break shown below

This break was not due to any fault of the rod manufacturer.

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4 original valve discs

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— minus 59,000 pounds per square inch.

It should be noted that photo micrographs of this steel taken before and after heat treatment show that the steel as received had a very large grain size, having an average grain diameter of 0.03 m.m. The structure after treating showed complete carbon migration, extremely fine texture and probably a sorbitic structure.

Study of the figures quoted for the two steels show that heat treating raises the ratio (Limiting stress)÷(Tensile strength) about 7 per cent, although these steels have a wide variation in carbon content (No. 1.—0.10 per cent C and No. 2.—0.40 per cent C) the ratios are about the same and are raised about the same amount by the "Heatreat" process.

The following additional examples of the magnitude of the ratio (Limiting stress) ÷ (Tensile strength) are taken from data published by Engineering Foundation:

STEEL	TREATMENT	RATIO $\frac{(L S)}{(T S)}$
S. A. E. 2340	Heat 1525°F. Furnace cool. Reheat 1450 oil quench, reheat 800°F. air cool	0.46
S. A. E. 2340	Same as above except final draw back 1200°F. air cool.	0.59
Carbon 0.34% Mang. 0.94%	Heat to 1600°F. furnace cool. (Normalized)	0.44
Carbon 0.34%	Heat to 1600°F. furnace cool. Reheat 1450°F. water quench. Reheat 1200°F. air cool. (Sorbitic)	0.49
Carbon 0.18% Mang. 0.37%	As rolled	0.45
Carbon 0.20% Mang. 0.65%	As rolled	0.53

These results show that the ratio LS÷TS is fairly constant for a wide variety of steel under varied conditions of heat treatment.

(b) Effect of Design

The effect of rapid changes of section on fatigue strength must receive very serious consideration. This is particularly true in the sucker rod pin problem. The following data is given from the researches of Moore and Kommers.

(c) Effect of Finish

The endurance of metals is greatly influenced by the condition of the surface and this is well illustrated by the following:

Finish	Relative Fatigue Range	Actual Fatigue Range
Rough turned	81	40,000 lbs.
Smooth turned	84	41,500 lbs.
Ground	89	44,000 lbs.
No. 0 and 00 Emery cloth	99	49,000 lbs.
Emery poper and rough polish	100	49,400 lbs.

The steel upon which the test was made contained 0.49 per cent carbon and had a tensile strength of 97,000 pounds per square inch with a fatigue range under best conditions of 49,400 pounds. This gives a ratio LS÷TS of 51 per cent.

(d) Effect of Heat Treatment on Fatigue

There is no doubt that proper heat treatment raises the fatigue range of any steel. It is believed that this is particularly true in the case of steel containing enough carbon (that is from 0.30 to 0.60 per cent), to give rather high tensile strengths in the heat treated condition. The thoroughness with which the heat treating is done has a very important bearing on the LS÷TS ratio. In order for this ratio to be high it is essential that all free ferrite be absorbed and retained in solution to the greatest possible extent. Small grain size is desirable because of its effect on tensile strength and therefore on the safe fatigue range if the LS÷TS ratio is used as a design factor.

For most uniform and optimum results from heat treated steel the material must have good regenerative power and be as clean and free from inclusions as possible. If this condition does not exist, great difficulty will be experienced in getting free ferrite into solution.

In this regard it is possible that minimum quench hardness tests on the steel may be used as a measure of suitability for the heat treatment and correlated data might be used for the development of quenching tests as an inspection method.

Calculation of Limiting Stress

Very meager data are available concerning the actual loads placed on sucker rods while pumping in a well. Nevertheless it should be worth while to try and find from existing information just what would be the maximum working stress which should be allowed under different conditions of casing size and well depth. In so doing the endurance limit factors which have been discussed earlier in this report are especially applied.

In making these calculations, the following were used:

1. Table of "Sucker Rod and Fluid Weights."
2. (Limiting stress) ÷ (Tensile strength) equals 0.50.
3. "Effect of Design" factor is taken as 90 per cent.
4. "Effect of Finish" factor is taken as 85 per cent.
5. Modified LS÷TS equals 0.50x.9x.85 which gives 0.38. The modified limiting stress is then 0.38 of the ultimate strength.
6. The friction factor of the rods in the well has been estimated as being 0.2 pounds per foot of well.
7. In the formula used for obtaining the working load which must not be exceeded for an infinite number of stress reversals the following notations are used:

S_1=Maximum intensity of stress for load P.

P=Maximum load on member (of either sign).

P_1=Minimum load on member (of either sign).

S_w=Modified limiting stress based on machine load, equals 0.38 (46,200) or 17,550 pounds.

Note—Calculations are based on steel with ultimate strength of 105,000 per square inch such as used in the D+B Heatreat Rods.

For breaking loads: $S_1 = \frac{17{,}550}{1-\frac{1}{2}\frac{P_1}{P}}$

Sucker Rod and Fluid Weights

¾"x30' rods with 1⅝"x4" Couplings.

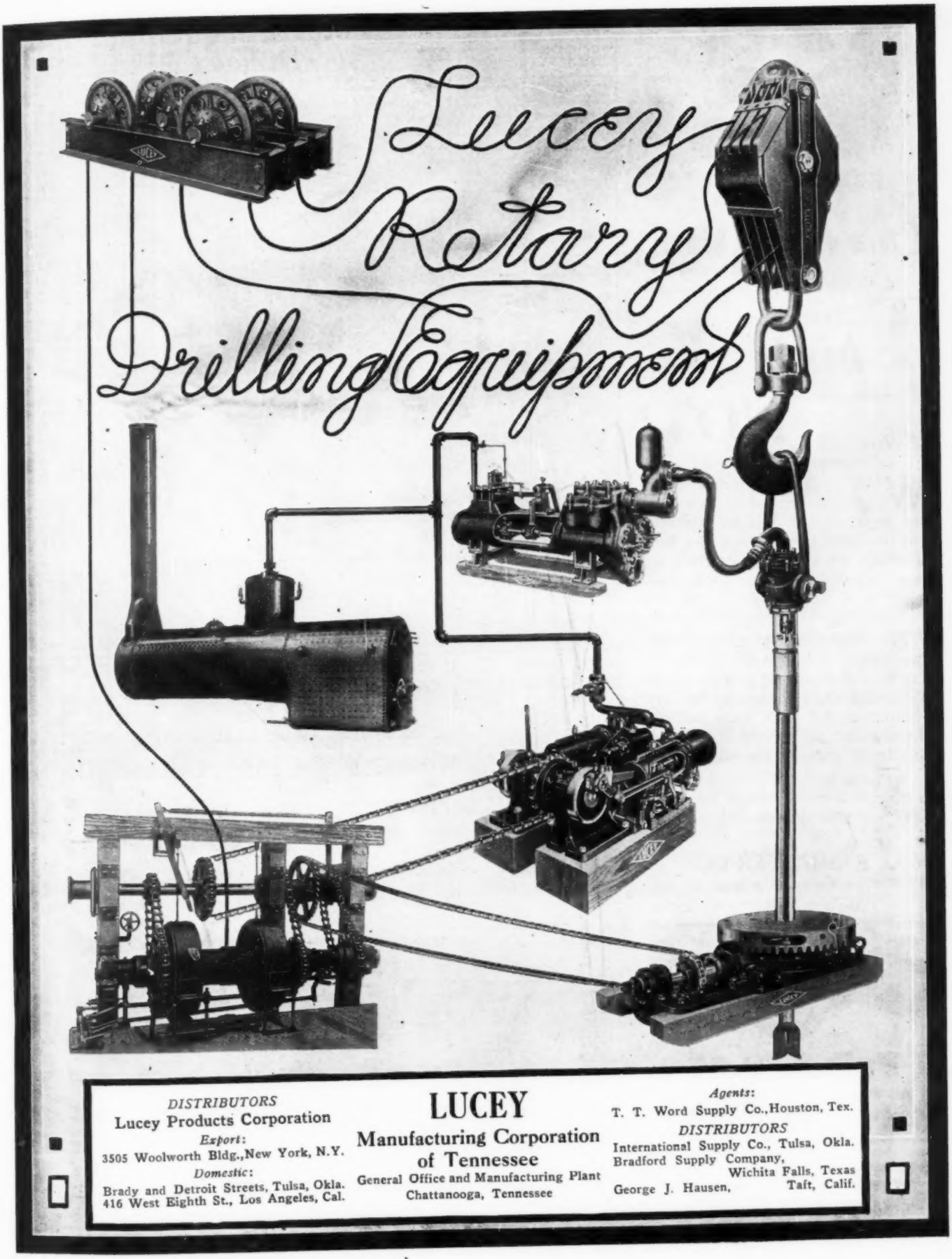
	DEPTH TO PUMP 1,000	2,000	3,000	4,000	5,000	
Approximate Pressure per sq. in., lbs.	380	760	1,140	1,520	1,900	
2-inch TUBING						
Area 1¼-inch plunger 2.40 sq. in.						
Net area fluid on plunger 1.96 sq. in.						
Weight of fluid on plunger, lbs.	745	1,490	2,235	2,980	3,725	31.6%
Weight of rods	1,615	3,230	4,845	6,460	8,075	68.4%
Total load of top rods	2,360	4,720	7,080	9,440	11,800	
2½-inch TUBING						
Areat 2¼-inch plunger 3.97 sq. in.						
Net area fluid on plunger 3.53 sq. in.						
Weight of fluid on plunger	1,341	2,683	4,024	5,366	6,707	45.4%
Weight of rods	1,615	3,230	4,845	6,460	8,075	54.6%
Total load of top rods	2,956	5,913	8,869	11,826	14,782	
3-inch TUBING						
Area 2¾-inch plunger 5.93 sq. in.						
Net area fluid on plunger 5.49 sq. in.						
Weight of fluid on plunger	2,086	4,172	6,258	8,345	10,431	56.3%
Weight of rods	1,615	3,230	4,845	6,460	8,075	43.7%
Total load on top rods	3,701	7,402	11,103	14,805	18,506	
4-inch TUBING						
Area 3¼-inch plunger 11.04 sq. in.						
Net area fluid on plunger 10.6 sq. in.						
Weight of fluid on plunger	4,028	8,056	12,084	16,112	20,140	71.4%
Weight of rods	1,615	3,230	4,845	6,460	8,075	28.6%
Total load on top rods	5,643	11,286	16,929	22,572	28,215	

Average weight with couplings per foot, 1.615 pounds.

Fluid figured at specific gravity of .88.

If fluid is mostly water add 14 per cent to weight of fluid.

The weights given are for dead load. Inasmuch as gas is almost invariably



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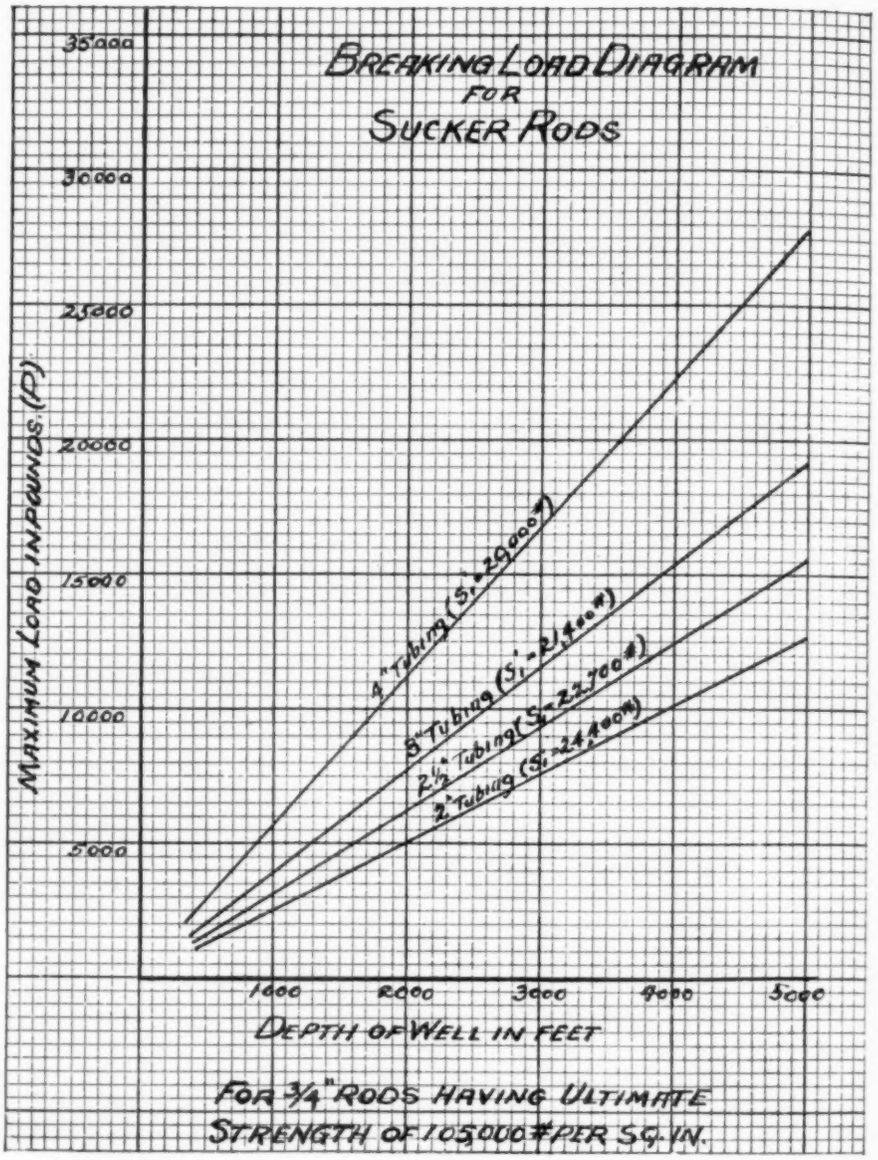

present to a greater or less extent, the load is usually lessened from 5 to 50 per cent.

Use of the Diagram

Knowing the depth of the hole which is to be pumped and the size of the tubing it is desired to use, the diagram will show whether the maximum load on the rods (P) is greater or less than the stress which may not be exceeded S'1) for the particular condition.

For example:

It is desired to pump a 4000-foot well using four-inch tubing. Find 4000 feet on the diagram for well depth. Follow up vertically until the sloping line market "4" Tubing" is intersected

BREAKING LOAD TABLE FOR SUCKER RODS

Depth Feet	Tubing Diameter Inches	Friction Pounds	Total Rod & Oil load Pounds	Total Rod Load Pounds	P	P¹	P¹/p	S¹1
4,000	2	800	9,440	6,460	10,240	5,660	0.56	24,400
5,000	2	1,000	11,800	8,075	12,800	7,075	0.55	24,400
1,000	2.5	200	2,956	1,615	3,156	1,415	0.45	22,700
2,000	2.5	400	5,913	3,230	6,313	2,830	0.45	22,700
3,000	2.5	600	8,869	4,845	9,469	4,245	0.45	22,700
4,000	2.5	800	11,826	6,460	12,626	5,660	0.45	22,700
5,000	2.5	1,000	14,782	8,075	15,782	7,075	0.45	22,700
1,000	3	200	3,700	1,615	3,900	1,415	0.36	21,400
2,000	3	400	7,402	3,230	7,802	2,830	0.36	21,400
3,000	3	600	11,100	4,845	11,700	4,245	0.36	21,400
4,000	3	800	14,805	6,460	15,605	5,660	0.36	21,400
5,000	3	1,000	18,500	8,075	19,500	7,075	0.36	21,400
1,000	4	200	5,643	1,615	5,843	1,415	0.24	20,000
2,000	4	400	11,286	3,230	11,886	2,830	0.24	20,000
3,000	4	600	16,929	4,845	17,529	4,245	0.24	20,000
4,000	4	800	22,572	6,460	23,372	5,660	0.24	20,000
5,000	4	1,000	28,215	8,075	28,215	7,075	0.24	20,000

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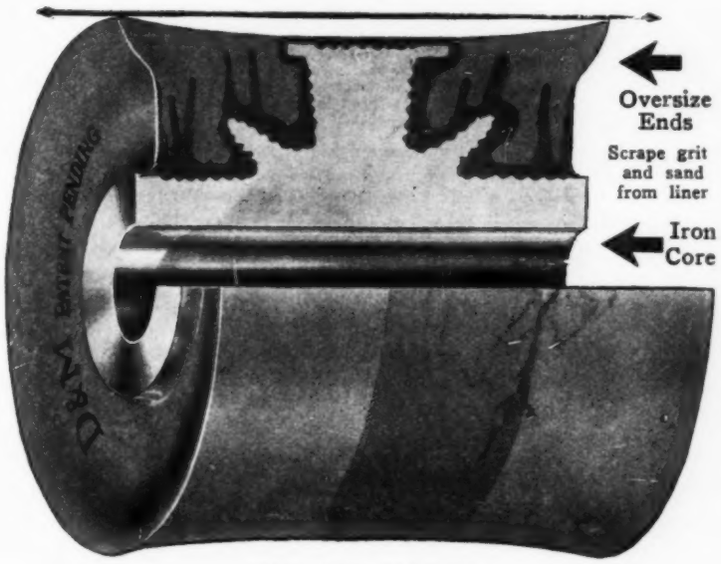

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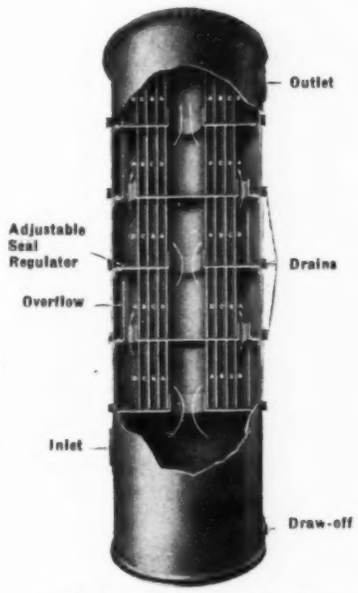

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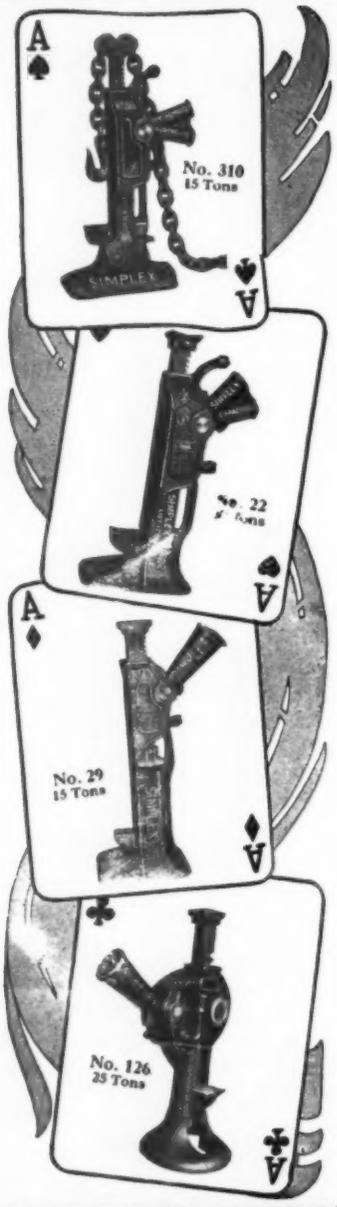

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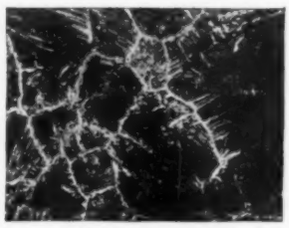
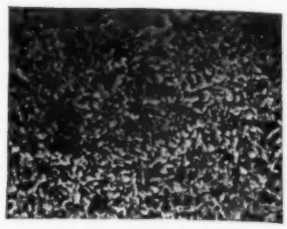


Structure of steel where rod stock has been improperly heated.



Illustrating the altered grain structure where stock has been properly heated.

Read off the corresponding ordinate, which is 22,500 pounds. It is seen that this exceeds S'1 by .500 pounds. In other words, if the rods were used under these conditions they should ultimately break by fatigue.

It would be necessary to use three-inch tubing for a 4000-foot well which gives a "P" of 15,500 pounds. This is below S'1 for a three-inch tubing which is 21,400 pounds and should serve indefinitely without breakage.

The diagram can also be used for three-quarter-inch rods of steel having an ultimate strength different from that given in the chart. The factor "S'1" alone will be altered.

The accompanying diagram gives a tabulation which shows the value of "S'1" for steels of various ultimate strengths and for the conditions obtaining for various sizes of tubing.

TABLE FOR VARYING FACTOR (S'1)
¾" SUCKER RODS

Ultimate Strength of Steel pounds per Square Inch	VALUE OF FACTOR S'1 For 2-inch Tubing	For 2½-inch Tubing	For 3-inch Tubing	For 4-inch Tubing
100,000	23,800	21,100	20,900	19,500
90,000	21,400	19,900	18,800	17,500
80,000	19,000	17,700	16,700	15,500
70,000	16,700	15,500	14,650	13,600
60,000	14,300	13,300	12,600	11,700

An example of the use of this table is as follows:

It is desired to know how deep a well could be pumped for an indefinite time without rod breakage by fatigue using a three-quarter-inch rod having an ultimate strength of 60,000 pounds per square inch and using a four-inch diameter tubing.

Under these conditions S'1 is found to be 11,700 pounds, which means that the maximum load must not exceed this figure if the rod is to operate indefinitely. Referring back to the diagram and finding P=11,700 on the vertical ordinate, then running horizontally till the line marked 4" tubing is met and then dropping down vertically it is found that the maximum depth of well which can be pumped is 2000 feet.

It is fully realized that important factors entering into the calculations have only been guessed at, but the error which may be present on account of the estimated friction load would make only a slight difference in the final results.

It is felt that until such time as actual well data are available, the figures submitted may be used as a guide to the choice pumping equipment.

(To be continued next week)

Columbian Exports

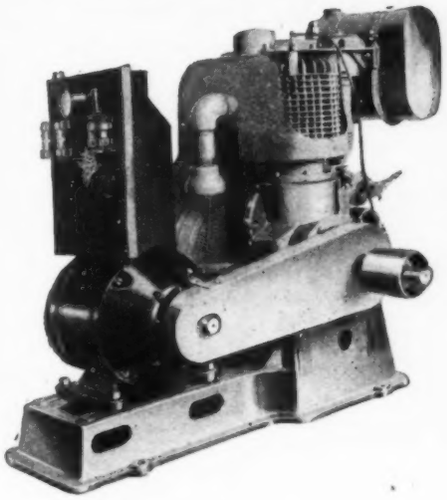
Cartagena, Columbia. — Exports of crude petroleum from Cartagena during April amounted to 793,120 barrels, compared with 784,702 barrels in March, the total for the first four months of the current year coming to 3,329,275 barrels. There were no exports during the corresponding period of 1925. Of the April shipments, 599,505 barrels went to New York and most of the remainder to Canada, but a shipment of 14,128 barrels to Rotterdam April 11 represents the first exportation to Europe from Cartagena.

Refinery at Lander

Lander, Wyo.—A refinery is to be erected near this town by Dallas Dome-Wyoming Oil Fields company to refine the production in the Dallas and Derby fields. Initial unit is to have a charging capacity of 2500 barrels. Campbell M. Hunter, internationally famous geologist, recently visited the company's holdings in Fremont county and the decision to erect the refinery followed his visit here. He is said to have purchased a Dubbs cracking process still during a visit in Chicago. Company recently completed two good wells in the deeper sands in the field.

Kevin-SunburstSummary

Great Falls, Mont.—There is a total of 725 producing oil wells, 67 producing gas wells in the Kevin-Sunburst field according to a recent field summary. A total of 407 failures are drilled, 361 on structure and 46 off. There are 29 rigs up, 36 drilling wells, and 23 validation holes.



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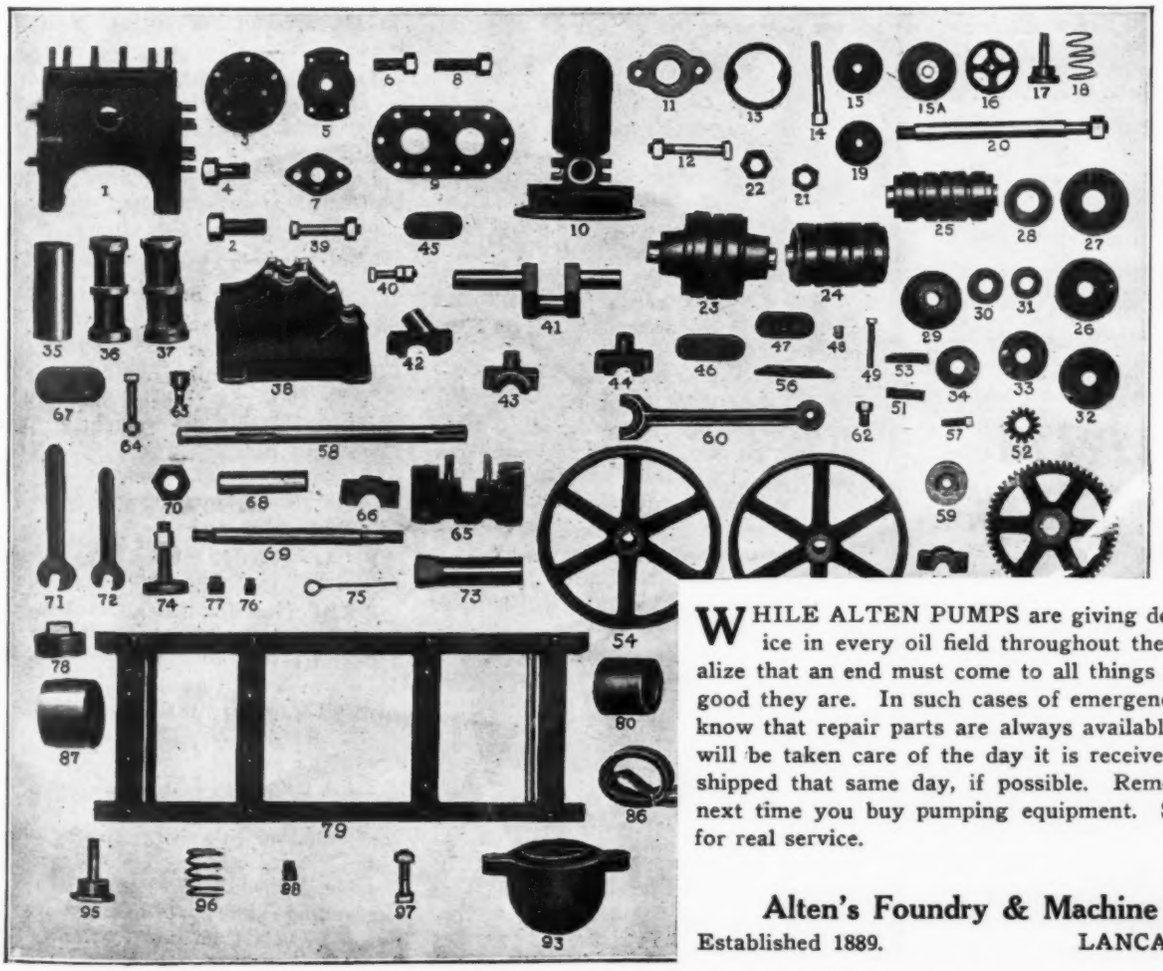
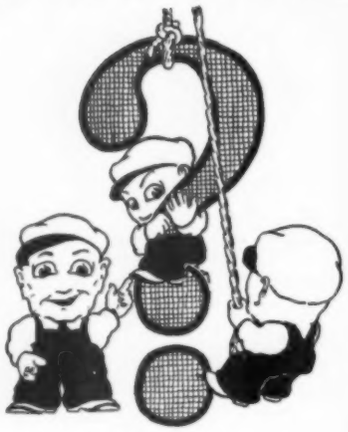


WHILE ALTEN PUMPS are giving dependable service in every oil field throughout the world, we realize that an end must come to all things no matter how good they are. In such cases of emergency it is well to know that repair parts are always available. Your order will be taken care of the day it is received and the part shipped that same day, if possible. Remember this the next time you buy pumping equipment. Specify Alten's for real service.

Alten's Foundry & Machine Works
Established 1889. LANCASTER, OHIO

Say you saw it in The OIL WEEKLY

DUNN TOOLAGRAM



"Do You Know Elevators?"

"Most of you will say you've used them all your life. Even so, and be that as it may, you don't really know elevators until you've used the Dunn Super-Safety. They are made in side door and double door types, in all standard sizes for drill pipe, tubing and casing."

"The chief says he'll send you one on approval, without obligation, and pay the freight. Fair enough?"

DUNN SAFETY

DUNN
MANUFACTURING COMPANY
OXNARD, CALIFORNIA

Mid-Continent Warehouse:
215 East Archer Street, Tulsa, Oklahoma
Export Sales Office:
150 Broadway, New York City

Double Door Type, rear view

SQUEAKS FROM THE BULL WHEEL

One on the Taxi Driver

"But we were only fifteen minutes getting here!" expostulated the passenger.

"I don't give a hang about that!" snarled the taxi driver. "The meter says we've come twenty miles. Now you fork over."

"All right," assented the passenger, paying. Now get ready to come with me for driving eighty miles an hour. I'm a speed cop."—Legion Weekly.

Jones (who had called around to see if his friend had recovered from a wild night): "Is Mr. Wizzy up yet?"

Landlady (sternly): "Yes he got up, drank his bath and went back to bed."

"Terrible! Terrible! Mary went swimming and a goat ate her clothes."

"What did she come home in?"

"In the twilight."

All the up-to-date florists are now advertising, "Say it with moonshine." They know that the flowers will come later.

Am They a Hell?

The newly appointed pastor of a Negro church faced a packed audience when he arose to deliver his sermon on this burning question: "Is there a hell?"

"Bredern," he said, "de Lord made de world round like a ball."

"Amen!" said the congregation.

"An' de Lord made two axles for de world to go round on, an' he put one axle at the north pole and one axle at the souf pole."

"Amen!" cried the congregation.

"An' de Lord put a lot of oil and grease in de center of de world to keep the axles greased an' oiled."

"Amen!" said the congregation.

"An' then a lot of sinners dig wells in Pennsylvania and steal de Lord's oil and grease. An' dey dig wells in Louisiana, Oklahoma an' Texas, Mexico and Russia and steal the Lord's oil and grease.

"An' some day dey will have all of de Lord's oil an' grease, and dem axles is gonna git hot. Den, dat will be hell, bredern, dat will be hell!"

He Wins

There is a club in New York devoted to the laziest men in the world. Any attempt by a member to hurry is punishable by a fine.

One day a member was seen driving his car past the club at a high rate of speed. Summoned before the committee, he excused himself by saying that he was too lazy to take his foot from the accelerator.—Yale Record.

"At sixty miles drove Tommie Sharp; there came a train—he plays a harp.

"At 50 miles drove Allie Pidd; he thought he wouldn't skid, but did.

"At 90 miles drove Eddie Shawn; the motor stopped, but he went on.

"Reposes here one Adolf Lutie; he turned his head to watch a cutie.

"And Booger Red is parked in this'n; he didn't stop or look or listen.

"Hi Holt, who lies in this here casket, turned in his seat to move a basket."

How He Got Her

"What, married? Don't make me laugh, stupid. How did you ever get a wife?"

"I just sobered up and there she was."—Toronto Goblin.

Mrs. Mutch—"I've been washing my diamonds all the morning in champagne. What do you do with yours when they're dirty?"

Mrs. Moore—"Throw 'em away."

A westerner, growing tired of substitutes, took a trip to Chicago to obtain some good old stuff. The price was considerably more than he expected, hence he was forced to draw on his account for carfare to return home.

The Chicago banker wired the visitor's home bank in Montana: "Mr. J. E. Smith here. Drunk. Wishes to cash check."

To which he received a quick reply: "Identification complete. Honor the check."

Another Scotch One

A Scotchman and a Hebrew were playing a golf match. Each had 100 strokes after 17 holes had been played. On the 18th the Hebrew had a paralytic stroke—and the Scotchman made him count it.

ANSWERS

1. At Nacogdoches, Nacogdoches County, in the early 80's.

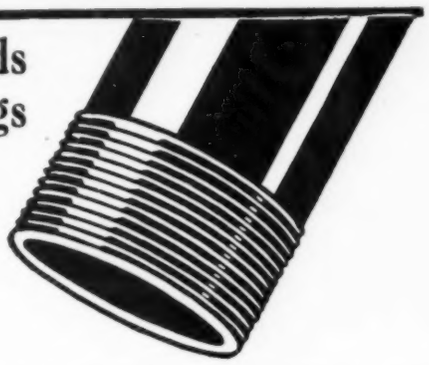
2. Al Hamil, driller, working for Captain Lucas, brought in Lucas No. 1, January 10, 1901.

3. Corsicana-Powell which made a daily average of 318,970 barrels during the week of November 3, 1923.

4. The cretaceous.

5. A "burned core" is a core that has become so hot while being taken that it has fused and the formation become altered until it is hardly recognizable. Burned cores are often very misleading and have been known to result in costly misinformation.

New Threads and Couplings make this pipe a genuine bargain!



Save money with Greenspon's pipe—prices run ⅓ to ½ lower. You get guaranteed pipe, every length of which has been thoroughly inspected, equipped with new threads and fitted with new couplings. You will get years of service from it.

Greenspon's casing, and ODEE pipe for gas lines, are likewise guaranteed! Ready at our yards in sizes to suit your needs, for immediate shipment.

Write today for prices—see for yourself how much you can save!

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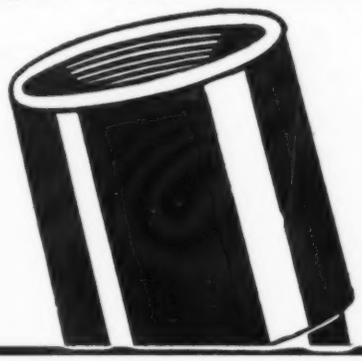

Iron & Steel Company

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LEADING oil drilling companies in the Mid-Continent, Colorado and Wyoming fields use Baroid to prevent dangerous blow-offs.

Baroid is specially processed barytes which stays in suspension indefinitely, is absolutely inert, non-electrostatic and non-electrolytic. Its sliming qualities protect equipment in drilling through the hardest formations.

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For Unusual Rough, Tough Use

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Weight 110 lbs.

Capacity FIVE TON STRAIGHT LINE

Size 16x17x13 High

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POSITIVE INTERNAL BRAKE

Construction Eight Pieces Electrical Steel Without Keys or Setscrews

Cast from high grade electric steel, the B. B. Bros. All Steel Hand Hoist is practically indestructible. Stands the knocks and bangs of the oil crews yet is always prepared to lift, pull or lower any five-ton load where anchorage can be obtained. When there's heavy construction or installation to do, the Beebe Hoist can save money and labor.

Steel Tail Hold Yoke or Truck Attachment. Plate can be Furnished Extra.

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